

EXHIBIT 8 (Part 3)
Deposition of Stephen Burns Dated
8/19/2020
With Deposition Exhibits
82 Con't, 83, 84, 85, 122 (redacted)



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 9 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

1.4 Description of Plant Facilities

The following is a brief description of the Bellefonte Nuclear Generating Plant Units 1 & 2.

- NSSS: Framatome (formerly Babcock & Wilcox) 205 4-Loop Pressurized Water Reactor
- Current Plant Capacity: 3,600 Megawatt Thermal, 1260 Megawatt Electric
- Turbine: GE (formerly Brown Boveri) Steam Turbine (2LP / 1HP) and a hydrogen cooled electricity generator;
- Natural Draft Cooling Towers;
- Unit 1 was 90% physically complete in 1988. The resources required to complete BLN1 (time, manpower and capital) bring the current completion estimate to approximately 55%.
- The Bellefonte site also contains a second identical unit that was completed to approximately 58% in 1988, and is currently estimated to be 35% complete.

1.5 Project Scope

Except for those specific items as being provided by others, the scope shall include all necessary management, supervision, mobilization, project controls, administrative staff, home office support, engineering, design, construction, procurement, subcontract administration, project controls, human resources, specialty technicians, safety, fabrication, inspections, testing, qualified labor, materials, equipment, tools, supplies, consumables, services, oversight, ancillary facilities, demobilization, and all other items required to perform the Work as described in the Bellefonte contract.

The scope of the BLN Project includes engineering and construction services required to complete engineering, procurement, construction and testing as itemized, but not limited, to the list below.

- Development of all required nuclear programs and plans to support completion of BLN-1,2
- Complete all system designs ensuring all regulatory requirements are met
- Complete all required engineering programs and analysis
- Completion of engineering design to support required plant modifications and upgrades
- Upgrade FSAR
- Licensing activities required to support transition from deferred construction status to operating license
- Completion of major projects:
 - i) Steam generator replacement
 - ii) Turbine-generator upgrade
 - iii) Containment sump replacement
 - iv) Switchyard upgrade
 - v) Security System Installation
 - vi) Facility Building Construction
- Construction activities to complete physical installation of mechanical, civil, electrical and instrument and controls components and systems:
 - i) Replace equipment that has been removed
 - ii) Refurbish equipment that will be retained
- Procurement of all equipment, safety and non-safety related, in accordance with required quality and code requirements

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004842



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 10 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- All testing required to ensure systems and components will meet design and safety requirements.
- Field engineering in support of the construction scope
- Materials management and warehousing for all material supplied
- Production of Comprehensive Work Packages and Integrated Test Plans for all field work performed under scope
- Production of closeout documentation for all field work performed

1.6 Project Quality Assurance Program Overview

SNC-Lavalin Nuclear (USA) Inc., a subsidiary of SNC-Lavalin Nuclear Inc. (SLN), The SNC-Lavalin Nuclear (USA), Inc. (SLN) Quality Assurance program is the overall Quality Assurance Program for the project. The SLN Quality Assurance Program, as described in this Nuclear Quality Assurance Plan (QAP)

- Complies with all applicable laws, follows prudent practice and is consistent with the requirements of the agreement between Nuclear Development LLC (ND) and SNC-Lavalin Nuclear Inc (SLN);
- Includes provision for audits by ND (or ND's Representative) for compliance with the ND Project Quality Assurance Plan for the scope of work as per the agreement between ND and SLN;

SNC-Lavalin Nuclear Inc., through SNC-Lavalin Nuclear (USA) Inc., will subcontract site fabrication and installation activities to qualified suppliers. The qualified suppliers shall implement and maintain a Quality Assurance program at the project site acceptable to SLN and ND. SLN shall maintain responsibility for all quality assurance requirements, including subcontracted activities and will perform oversight on activities performed by SNC-Lavalin and their suppliers in accordance with the Bellefonte Oversight Plan for the contracted SLN project work scope covering the following project activities:

- Design (SLN scope)
- Construction (Scope of a Sub-Supplier qualified by SLN)
- Procurement (SLN scope)
- Inspection and Testing (Scope of a Sub-Supplier qualified by SLN)
- Handling and storage of nuclear materials and components (Warehousing) (Scope of a Sub-Supplier qualified by SLN)
- Construction Work Packages (Scope of a Sub-Supplier qualified by SLN)

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004843



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 11 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

1.7 Nuclear Safety Culture

Nuclear safety culture is defined as the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment. The following Nuclear Safety Culture principles apply to the BLN Project:

- Responsibility and authority for nuclear safety are well defined and clearly understood. Reporting relationships, positional authority, and team responsibilities emphasize the overriding importance of nuclear safety;
- Project team members are watchful for assumptions, anomalies, values, conditions, or activities that can have an undesirable effect on plant safety;
- Communications maintain a focus on safety;

Executive and senior managers are the leading advocates of nuclear safety and demonstrate their commitment both in word and action. The nuclear safety message is communicated frequently and consistently, occasionally as a stand-alone theme.

1.8 Authority to Stop Work

SNC-Lavalin Nuclear QA and Contractor quality assurance and inspection personnel have the authority, and the responsibility, to stop work in progress which is not being done in accordance with approved procedures or where safety or structure, system or component integrity may be jeopardized. This extends to off-site work performed by suppliers furnishing safety-related materials and services to SNC-Lavalin.

1.9 Organization

SNC-Lavalin Nuclear Inc. will have overall responsibility for Project Quality Assurance and will comply with SNC-Lavalin Nuclear Inc. Quality Assurance Manual 2206-01912-QM-0001. The Quality Assurance Manual is SNC-Lavalin Nuclear Inc.'s commitment to meeting the Quality Assurance requirements of 10CFR50 Appendix B.

SNC-Lavalin Nuclear Inc., through SNC-Lavalin Nuclear (USA) Inc., will subcontract site engineering and construction activities to qualified suppliers, as required. The qualified suppliers shall implement and maintain a Quality Assurance program at the project site acceptable to SLN and ND. SLN shall maintain responsibility for all quality assurance requirements, including subcontracted activities.

This Bellefonte Project Nuclear QA Plan is considered a living document and will be revised, reviewed, and approved as changes are made.

The SNC-Lavalin Nuclear Inc. Quality Assurance Program is the overall Quality Assurance Program for the project. SNC-Lavalin and all direct suppliers to SNC-Lavalin Nuclear shall be qualified in accordance with requirements of this QAP. SLN shall plan and conduct surveillance on all activities performed by its sub-suppliers to assure adequate oversight of their performance.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004844



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective:

2018.10.18

Page 12 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

The overall BLN Project organization shall be as defined in Bellefonte Project Execution Plan. The project Organization Chart shall be maintained and updated through the life of the project by the Project Manager or the Deputy Project Manager. This does not preclude the Project Manager from producing multiple organization charts to completely define the project structure.

1.10 Organizational Structure

Personnel performing activities on the BLN Project for all phases of project execution are shown in an integrated project organization chart that is developed and maintained through the life of the project by the BLN Project Director. This does not preclude the BLN Project Director from producing multiple organization charts to completely define the project structure. The Project Organization charts will be reviewed periodically and will be filed separately by Document Control.

1.11 Organizational Independence

For the BLN Plant, independence shall be maintained between the organization performing the checking (quality assurance and quality control) functions and the organizations performing the functions. This provision is not applicable to design review/verification.

1.12 Responsibilities

This QAP defines responsibilities related to implementation of the Quality Program applicable to execution of BLN project.

The detailed responsibilities of the key SNC-Lavalin individuals are defined in the Bellefonte Project Execution Plan. All other individual responsibilities shall be as described in the other detailed plans referenced by Project Management Plan. All SNC-Lavalin personnel assigned to this project shall perform their assigned duties in compliance with the SNC-Lavalin Nuclear Inc. Quality Assurance program and under the direction of SNC-Lavalin Nuclear qualified personnel. Records of personnel qualifications shall be available for inspection by ND as required.

1.12.1 Project Director

The Project Director reports to the SNC-Lavalin Chief Nuclear Officer and is responsible:

- for the implementation and effectiveness of this quality assurance plan;
- to develop and maintain the Project Organization Chart through the life of the project.
- to ensure that personnel assigned to perform activities are trained, qualified and competent to perform their assigned tasks effectively;
- for identifying Customer communication channels;
- for obtaining, assessing, and issuing information gained from experience for design, construction, installation and commissioning activities;
- for managing project staffing as necessary;
- for reviewing Customer's work request, tendering documents, contracts and associated documents, to determine that the requirements are defined and documented, and that SLN's resources and capability are adequate to meet the requirements;



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 13 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- for assigning project resources appropriate for the work to be performed;
- for ensuring that the completion assurance is performed.

1.12.2 **Project Controls Manager**

The Project Controls Manager is responsible to manage all activities related to scheduling, planning, estimating, reporting, and cost control for the project.

1.12.3 **Project Quality Assurance Manager**

The Project Quality Assurance Manager reports functionally to SNC-Lavalin Director, Quality Assurance and to the BLN Project Director for implementation of the Project QA program, as described in this QAP. The SLN Quality Assurance Manager shall have overall responsibility for implementing, monitoring compliance, and reporting project performance with respect to quality assurance.

The Quality Assurance Manager has responsibility to plan and execute surveillance on project activities assigned to be performed by SLN's qualified suppliers responsible for execution of construction work.

The Quality Assurance Manager shall be independent of cost and schedule considerations and has the authority to plan, establish, implement and maintain this Quality Assurance Plan and is the management representative who has authority and responsibility to resolve quality matters, and has the organizational freedom, along with those responsible for verification, audit and program review functions, to:

- Identify and record quality problems and problems related to the effective implementation of this QAP;
- Initiate, recommend, or provide solutions to such problems through designated channels;
- Verify and confirm implementation and effectiveness of solutions;
- Control further processing, delivery, or installation of a nonconforming item or service until a disposition has been obtained.

The Quality Assurance Manager and persons responsible for the verification, audit, and program review functions have direct access to a level of management necessary to ensure that appropriate actions are implemented.

The Quality Assurance Manager has a direct line of communication to the BLN Project Director and is assigned the responsibility, authority, and organizational freedom, to initiate, implement and control the Quality Assurance Plan and is responsible:

- to represent the project team on all matters pertaining to quality;
- for planning, establishing, documenting, and maintaining this quality assurance plan;
- to direct the performance of internal and external quality audits;
- for verification of purchased items and services for construction and installation work;
- for planning and conducting oversight activities as necessary;
- for providing indoctrination and training in this Quality Assurance Plan (QAP);
- to ensure that trained, qualified, competent, and as required certified, personnel are assigned to perform quality related activities;



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective:

2018.10.18

Page 14 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- to report to the Project Executive Committee, if requested, on the performance of the Quality Assurance Plan;
- for acceptance of quality services;
- for evaluating and ensuring contractors selected meet project quality requirements;
- for reviewing and accepting of supplier furnished documents;
- for providing support in ensuring satisfactory performance with regard to the Project Objectives.

1.12.4 **Project Quality Control Manager**

The Project Quality Control Manager reports functionally to the Director, Quality Assurance and to the Project Construction Manager for execution of project quality control activities and functionally reports to SNC-Lavalin Nuclear Quality Manager.

The Quality Control Manager shall be responsible for:

- Providing guidance to Quality Assurance Specialists assigned to the project.
- Providing oversight of incoming, in-process, and final inspections on the project as detailed on the inspection and test plan and procedures.
- Staffing QC positions for the project with suitably qualified individuals.
- Providing support to project in ensuring satisfactory performance with regard to the project quality control objectives.
- Ensure that quality control plans/checklist and records are prepared and maintained
- Initiate, control and report nonconforming items during site installation phase;
- Ensure that quality records are compiled in HD/HF and approved prior submission for acceptance
- Providing on-job training of site inspection personnel on the quality project requirements.
- Interfacing on matters relating to quality with the Customer as well as the Regulatory Authorities as requested by project QA Manager.

1.12.5 **Project Engineering Manager**

The Project Engineering Manager reports to the BLN Project Director and is responsible for:

- overall design control,
- ensuring that design is defined, controlled and verified, and
- ensuring availability of appropriate verification and validation of design analysis tools.
- ensuring compliance with approved design, regulatory requirements, codes, standards and good engineering practices.
- providing general direction for establishing technical, safety and quality standards for engineering deliverables.
- reviewing and approving key technical documentation
- monitoring the technical quality of engineering deliverables
- providing assistance to engineering pertaining to codes, standards, regulatory requirements
- technical liaison with customers regarding the technical quality of engineering services



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 15 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

Lead Discipline Engineers are responsible to ensure that their staff performs design activities in accordance with applicable statutes, standards, codes, customer requirements, and corporate policies and procedures. Specific responsibilities include but are not limited to:

- reviewing and approving the selection of design inputs,
- correctly translating design input into specifications, drawings, procedures, instructions and other design documents,
- ensuring appropriate quality standards are included in design documents and their selection is reviewed and approved,
- selection and review for suitability of application of design methods, materials, parts, equipment, and processes that are essential to the safety-related functions of structures, systems and components,
- making applicable information derived from operating experience available to appropriate design personnel
- performing design analysis and verification;
- assigning work activities to design staff and revise as required,
- providing status reporting of work activities to Project Managers, or Vice Presidents, as required,
- monitoring staff performance to customer requirements

1.12.6 Project Construction Manager

The BLN Project Construction Manager reports to the BLN Project Director and is responsible for:

- executing construction and installation activities,
- ensuring adequate resources are available, and
- interfacing with quality assurance personnel on quality matters

1.12.7 Project Procurement Manager

The BLN Project Procurement Manager reports to the BLN Project Director and is responsible for:

- supervision of supply chain personnel,
- approving procurement documents, prior to issue,
- communications and transactions between the project and suppliers; and
- supplier commercial contract review.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 16 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

1.12.8 Project Training Manager

The Training Manager reports to the BLN Project Director and is responsible for:

Ensuring that the Training Plans meet the training requirements of the Project;

- Ensuring that necessary resources are identified, planned for, and effectively applied;
- Leading, organizing, and verifying the training and work activities of the training department;
- Ensuring that the BLN Training Program follows and meets the requirements set out by the Contract with ND and the BLN Quality Assurance Plan;
- Approving plans, work instructions, and training packages;
- Ensuring Instructors are qualified in accordance with the training and procedures specified in this Plan;
- Monitoring training facilities and support infrastructure, and reporting inadequacies to the BLN Performance Improvement Director ;
- Ensuring Trainees are qualified as required by the Project;
- Ensuring that the BLN Training Coordinator maintains all training records accurately, and to an auditable standard;
- Arranging self-assessments and internal audits to ensure procedures and best practices are followed; and
- Obtaining feedback from the field (through OE reviews by Training Supervisors) and ensuring they are incorporated into the training program (continuous improvement process).

1.12.9 Project Onboarding Training Manager

The Onboarding Training Manager reports to the BLN Training Manager, and is responsible for the following:

- For the creation and maintenance of all training records in a learning management system;
- For the interfacing with, and population of information into the ND's Operators learning management system (LMS);
- To ensure that personnel assigned to perform engineering and support activities are trained, and qualified to perform their assigned tasks effectively.



SNC-LAVALIN
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 17 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

2 Quality Assurance Program

SNC-Lavalin Nuclear Inc. will have overall responsibility for Project Quality Assurance for the Bellefonte Project and will comply with SNC-Lavalin Nuclear Inc. Quality Assurance Manual 2206-01-00-QM-0001.

SNC-Lavalin's Nuclear Quality Assurance Program complies with applicable clauses from the following national and international standards:

- ASME Boiler and Pressure Vessel Code, Section III, Division 1;
- ASME NQA-1:2017, Part 1 Requirements for Quality Assurance Processes for Nuclear Facilities;
- 10 CFR Part 50 Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.

SNC-Lavalin Nuclear Inc. will subcontract certain activities defined in the Procurement and Subcontract Management plan to qualified supplies for the activities they are subcontracted to perform. SLN shall accomplish oversight quality assurance for subcontracted activities in accordance with clause 0, Control of Purchased Items and Services.

The quality assurance program and supporting procedures (if applicable) will be identified and described in the following clauses. Throughout the life of the project procedures may be revised. These procedures may be SLN corporate procedures, SLN project specific procedures or supplier procedures for meeting Code and contract requirements. If this occurs, the SLN Quality Assurance Manager shall review these changes to ensure the change does not affect any commitment made in this Quality Assurance Plan. This is accomplished by the following procedures;

- 2206-01-20-OP-0001, Quality Assurance Document Control
- 2206-01-40-OP-0010, Evaluation of Supplier Quality Program Manuals

Where a quality requirement is being met by a subcontractor, the applicable clause will describe the requirements that must be met to achieve project quality.

Subcontractors will comply with their Quality Assurance program accepted by SLN in addition to the additional project quality requirements included in this SLN Quality Assurance Plan (QAP) Subcontractors will demonstrate compliance to their Quality Assurance program and the applicable requirements of the SLN Quality Plan during the SLN supplier qualification maintenance process. This may be through audit or performance monitoring.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
1529 18-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 18 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

2.1 Personnel Indoctrination and Training

In addition to the mandatory Indoctrination and Training on the SLN Quality Assurance Program, The BLN Project team shall be indoctrinated in this QAP. Project personnel shall meet the indoctrination and training requirements of the Quality Assurance Program that controls the activities.

Project personnel performing or otherwise verifying activities affecting quality shall be competent on the basis of appropriate education, training, skills, experience and written examination. They will be provided with the appropriate indoctrination and training as necessary to assure suitable proficiency is achieved and maintained.

Personnel shall receive indoctrination and training prior to performing activities under this PQP when they change areas of responsibility and when this PQP and/or referenced procedures are revised. Training records shall be maintained for BLN Project personnel.

Indoctrination and training of personnel shall be carried out in accordance with SLN Operating Procedure 2206-03-10-OP-0001, Personnel Indoctrination and Training, as related to their job function. Supplier / Constructor personnel performing activities controlled directly by SLN Quality Manual shall be indoctrinated and trained to the SLN Quality Requirements.

Project specific training and qualification requirements shall be identified in the BLN Project Training Plan.

For organizations providing sub-contract services, any special qualifications or training requirements for their personnel working on the project, shall be specified in the subcontract agreements. All subcontract personnel shall be qualified for the work they are carrying out prior to performing any activity for which qualification is required by the project organization performing the work. In addition, subcontract personnel may be required to comply with the training requirements identified in the BLN Project Training Plan. All other non-quality related training shall be defined and described in the Project Training Plan.

2.1.1 Personnel Qualification

All personnel shall be qualified for the work they are performing prior to performing any activity for which qualification is required by the project organization performing the work. Personnel qualification records shall be reviewed and verified by SLN during qualification of the supplier or during project surveillance of that activity.

Personnel qualifications will be recorded, maintained, and stored in accordance with the following SLN Procedures:

- 2206-01-40-OP-0003, QA Audit Personnel – Qualification Requirements;
- 2206-01-40-OP-0012, Inspection Personnel – Qualification Requirements;
- 2206-03-10-OP-0001, Personnel Indoctrination and Training;
- 2206-03-30-OP-0002, Engineering Qualifications Management;



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 19 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

SLN will audit and accept QA Programs of qualified Suppliers / Constructors. Personnel qualifications will be recorded, maintained and stored in accordance with procedural requirements. Personnel requiring qualification and certification include;

- Test Personnel;
- Receiving Personnel;
- Inspection Personnel;
- Source Surveillance Personnel;
- Non-destructive Examination Personnel;
- Audit Personnel;
- Engineering Personnel performing American Society of Mechanical Engineers (ASME) Code Certification activities;
- Welders and Trade Personnel.

Personnel performing visual inspections required by the ASME Boiler and Pressure Vessel Code shall be qualified and certified according to ASME Code requirements.

2.1.2 **Qualification of Engineering Personnel**

Personnel performing engineering work shall be qualified in accordance with SLN Operating Procedure 2206-03-10-OP-0002, Engineering Qualifications Management.

The Engineering Manager shall ensure Design Engineers involved in evaluating changes to final design have the demonstrated competence in the specific design area of interest and have an adequate understanding of the requirements and intent of the original design.

In addition, if there are project specific qualification requirements, the Engineering Manager shall ensure those requirements are incorporated into the Engineering Plan, and ensure personnel are qualified before assigning them to these specific roles.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 20 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

3 Design Control

3.1 Control of Design and Interfaces

SLN has overall responsibility for engineering activities and shall directly perform design activities and provide support during construction and Start Up. Engineering activity shall be subcontracted to qualified suppliers as required.

The Engineering Manager has overall responsibility for design activity and control of design change ensuring that all designs/design changes on the BLN Project are defined, controlled, and verified. The Design Inputs shall be correctly translated into specifications, drawings, procedures and instructions. Design adequacy shall be verified by individuals other than those who designed the item.

Design changes shall be governed by control measures commensurate with those applied to the original design. The governing process is described under section 3.4.4, Design Change Control.

Design interfaces shall be identified and controlled. In the course of the design development and control, SNC-Lavalin shall interface with suppliers, the plant Operator and ND at various steps. Deviations to the Interface Requirements will be documented in the Scope of Work or applicable Master EC Package.

Qualification of engineering personnel who perform verification activities shall be qualified in accordance with Operating Procedure 2206-03-10-OP-0002 Engineering Qualifications Management.

The Engineering Plan identifies the organizations, controls, and responsibilities among participating organizations for the preparation, review, approval, issue, distribution, and revision of design documents.

The Engineering Manager is responsible for identification and control of design interfaces and for coordination of the design efforts among the project organizations.

The Document Control Lead shall ensure information transmitted across interfaces shall identify the status of the design information or document provided. Where it is necessary to initially transmit design information orally or by other informal means, the transmittal shall be confirmed promptly by a formal submission.

Engineering interface control shall be described, as appropriate, in the following documents:

- The Engineering Plan for the project;
- The supporting Design Plan for the particular scope of work;
- The Design Verification Plan.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 21 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

3.2 ND Enterprises Asset Management

The Enterprise Content Manager system (ECM) will remain as a repository for Engineering Design Changes (EDCs) and shall be used to control modification progression through SLN. Relevant ECM fields will be populated as needed to progress work and maintain configuration management. Engineering will be required to populate the relevant ECM fields at the end of the following modification phases:

- At the start of Scoping to register Master EDCs.
- At the end of Modification Planning to populate Master EDCs, and populate the Master Equipment List (MEL).
- At the end of Design Completion and prior to Available for Service to incorporate all field, and non-intent changes.
- Prior to Closeout to launch the AEL, and populate closeout related panels.

A scanned version of the approved Master EDC Binder and/or Design Package shall be uploaded to ECM. When the opportunity arises to populate ECM, the EDC packages shall be attached to the Reference Document List of the relevant Master or Design EDC.

Approval of the EDC resides with the scanned copies of the packages in ECM.

3.3 Design Planning

A Design Interface Agreement ("DIA") will be put in place between ND and SNC-Lavalin Nuclear Inc. The DIA defines and documents the responsibilities of ND and SNC-Lavalin Nuclear Inc. in sufficient detail to cover the preparation, review and approval, issuance, distribution and revision of documents across design interfaces.

The overall responsibility for engineering resides with SLN.

The Engineering Manager has overall responsibility for design/design change and shall ensure all designs/design changes on the BLN Project are defined, controlled, and verified. The Design Inputs shall be correctly translated into specifications, drawings, procedures and instructions. Design adequacy shall be verified by individuals other than those who designed the item.

Engineering activities shall consist of a set of Engineering Design Changes (EDCs) documented in Modification Packages. The EDCs will provide the necessary authorization and directions to perform Plant modifications.

The Engineering Manager is responsible for preparation of an Engineering Plan and supporting Design Plans with the necessary level of detail to permit the design process to be carried out in a correct manner and to permit verification the design meets requirements. The Engineering Plan and supporting Design Plans shall include:

- Work Package Identification and Description;
- Work to be Sub-contracted;

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004854



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 22 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- Interfaces and Division of Responsibility;
- Quality Assurance Program Requirements;
- Regulatory and Code Requirements;
- Design Inputs;
- Human Factors Engineering;
- Design Requirements;
- Assumptions and Validation of Assumptions;
- Design Processes and Tools;
- Design Tasks and Activities;
- Design Outputs and Deliverables;
- System Classification;
- Signing Protocol;
- Design Verification;
- Procurement Considerations;
- Design Change Control;
- Tasks and Deliverables Status;
- Assignment of Responsibility.

The Engineering Plan and supporting Design Plans shall be reviewed and approved in accordance with operating procedure XXX, Bellefonte Design Change Procedure. As changes occur during the design process, the Engineering Manager shall ensure Engineering Plan and supporting Design Plans are updated and maintained. The Engineering Plan and supporting Design Plans shall be prepared to fully reflect the requirements of the Project Quality Plan.

Modification Packages shall be submitted for review and acceptance, through the Engineering Manager. Following acceptance by SLN, the Modification Packages will be issued to the subcontractor in accordance with clause 6, Document Control.



SNC-LAVALIN
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 23 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

3.4 Engineering Design Changes (EDCs)

3.4.1 Design inputs

The Engineering Manager shall ensure design inputs are identified and documented, and their selection reviewed for adequacy and approved. Design Inputs shall be accepted in accordance with XXX, Bellefonte Design Change Procedure.

Design inputs shall contain sufficient detail necessary to permit the design activities to be carried out in the correct manner and provide a reference basis for decision making, performance of design verification and evaluation of design changes.

Any changes to design input during the design process, shall be subject to acceptance in accordance with the original requirements.

3.4.2 Design Process

The Engineering Manager shall ensure requirements of the design specification have been correctly translated into technical specifications, drawings, procedures, and instructions, throughout the design process.

The design methods, material, parts, equipment and processes that are essential to the function of the item shall be selected and reviewed for suitability of application through the preparation, review, and approval of the Engineering Plan. Applicable information derived from experience, as set forth in reports or other documentation shall be made available to appropriate design personnel.

The Engineering Manager shall ensure the final design:

- Is relatable to the design input documentation in sufficient detail to permit design verification;
- Specifies required inspection and tests and includes or references appropriate acceptance criteria;
- Identifies assemblies and/or components that are part of the item being designed. When such an assembly or component part is a commercial grade item, the characteristics of the item to be verified for acceptance and the acceptance criteria for those characteristics shall be documented.

The Master Engineering Change (MEC) or Engineering Design Change (EDC) development shall follow the ND Enterprise Asset Management process, and applicable in the ND governance. In addition, the SLN design process shall comply with all required procedures related to the engineering design and configuration management process.

The Engineering Manager shall ensure design analysis is planned, controlled, and documented in accordance with the Design Plan. The design analysis document shall be legible and in a form suitable for reproduction, filing, and retrieval. In addition, design analysis shall be sufficiently detailed as to purpose, method, assumptions, design input, references, and units such that a person technically qualified in the subject can review and understand the analysis and verify the adequacy of the results without recourse to the originator of the design.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004856



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 24 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

Design calculation shall be identified by document number and shall include, as a minimum, the following:

- Subject – including structure, system or component, to which the calculation applies;
- Preparer and date;
- Reviewer and date;
- Approver and date.

The Engineering Manager shall ensure pre-verified computer programs used in the design process are validated prior to software's first use. Validation shall be in accordance with SLN Operating Procedure 2206-07-50-OP-0003, Design Software Verification and Validation.

The Engineering Manager shall ensure design analysis documentation includes:

- The objective of the analysis;
- Design inputs and their sources;
- Results of literature searches or other applicable background data, e.g. Operating Experience (OE);
- Assumptions and indication of those assumptions that must be validated as the design proceeds;
- Identification of any computer program, including identification of the computer type, computer program name and revision, inputs, outputs, evidence or reference to computer program verification, and the bases (or reference thereto) supporting application of the computer program to the specific physical problem.

3.4.3 Design Verification

Design outputs shall be provided in a format suitable for verification against design inputs and shall be approved prior to issue as identified in the Design Verification Plan and Design Plan. The design output documentation shall be adequate to support the facility design, construction, and operation. Design output shall:

- Be uniquely identified;
- Meet the design input requirements;
- Specify the quality assurance requirements to be applied to the structure, system, or components and / or services;
- Specify jurisdictional requirements, codes, standards, classifications and other criteria;
- Provide appropriate information and traceability for subsequent phases including: purchasing, construction, installation, commissioning, operation, decommissioning, or software development;



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 25 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- Contain or reference item or service acceptance criteria;
- Specify the characteristics of the item or service that are essential for its safe and proper use.

The Design Engineer shall determine the Quality Assurance Program Category and shall perform an empirical and functional evaluation.

Deficiencies found in Design Output documents during subsequent phases of purchasing, fabrication, installation, construction, commissioning, operations, decommissioning or software development, shall be handled in accordance with SLN Quality Assurance Manual, Section 15, Control of Nonconforming Items and Services.

When deficiencies are found by organizations other than SLN, the deficiencies shall be reported to SLN in accordance with the organization's quality assurance program that found the deficiency. SLN shall record, review and evaluate these deficiencies in accordance with SLN Quality Assurance Program. The results of the evaluation shall be communicated to relevant organizations in accordance with the following sections of the SLN Quality Assurance Manual:

- Section 15, Control of Nonconforming Items and Services;
- Section 16, Corrective Action;
- Section 3.8, Design Change Control.

The Engineering Manager shall ensure at appropriate stages in the design process, as detailed in the Design Verification Plan. The Design Verification Plan shall be issued in a timely manner to ensure the design output satisfies the design input requirements. The results of the design verification shall be documented based upon the verification method including identification of the verifier.

Verification shall be performed by competent individual(s) or group(s) independent of those who performed the original design.

The Engineering Manager shall ensure design verification is performed prior to releasing the design for procurement, fabrication, installation, or for use by another design organization. In addition, design verification must be completed prior to the structure, system, or component, is required to perform its intended function.

If the design is revised to resolve verification findings, the revised design shall be verified prior to release for use.

Where changes to previously verified designs have been made, design verification shall be required for the changes. The verification shall include an evaluation of the effects of the changes on the overall design and on any design analysis upon which the design is based. The Design Engineer shall ensure any other documents affected by the design change are revised and controlled.



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective:

2018.10.18

Page 26 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

The nature and extent of design verification shall be dependent upon:

- Importance or impact on safety of the structure, system, or component;
- Complexity of the design;
- Degree of standardization;
- The state of the art; and
- Similarity to previously proven designs.

Verification shall employ one or more of the following methods;

- Design Review;
- Alternate Calculations; or
- Qualification Testing.

Design reviews shall provide assurance the final design is correct and satisfactory by addressing the following:

- Were the design inputs correctly selected?
- Are assumptions necessary to perform the design activity adequately described and reasonable? Where necessary, are the assumptions identified for subsequent re-verification when the detailed design activities are completed? Were assumptions validated?
- Were appropriate design methods and computer programs used?
- Were the design inputs correctly incorporated into the design?
- Is the design output reasonable compared to design input?
- Are the necessary design inputs and verification requirements for interfacing organizations specified in the design documents or in supporting procedures or instructions?
- Have suitable materials, parts, processes, and inspection and testing criteria been specified?

Alternate calculations shall use alternate methods to verify correctness of the original calculation or analysis. Alternate calculations shall be performed by qualified individuals as identified in the Design Verification Plan. The appropriateness of assumptions; input data used; and the computer program, its associated computer hardware and system software, or other calculation method used shall also be reviewed.

As documented in the Design Verification Plan, qualification testing shall be performed by a qualified sub-contractor controlled in accordance with this Project Quality Plan.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004859



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 27 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

The test procedure(s) shall clearly define the test configuration, pre-requisites, methods, equipment, and acceptance criteria. The test procedure(s) shall be reviewed and accepted by the assigned verifier as documented in the Design Verification Plan.

Qualification testing shall demonstrate the adequacy of performance under conditions that simulate the most adverse conditions. Operating modes and environmental conditions in which the item must perform satisfactory shall be considered in determining the most adverse conditions. Where the qualification test is intended to verify only specific design features, the other features in the design shall be verified by other methods.

When tests are performed on models, scaling laws shall be established and verified. The results of model test work shall be subject to error analysis, prior to use in the final design.

All testing procedure(s) and complete documentation shall be included in the Qualification Test Report. This Report shall be submitted to the assigned verifier for review, and to the Engineering Manager for acceptance.

If qualification testing indicates modifications to the item are necessary to obtain acceptable performance, the Engineering Manager shall ensure the design output documents are revised, the item modified and retested.

The test procedure and test reports shall be retained in accordance with Section 17 of SLN Quality Manual.

3.4.4 Design Change Control

Design Change Control applies to ND accepted EDC packages. The Engineering Manager shall ensure non-intent design changes to final designs and field changes are justified, evaluated and subject to design control measures commensurate with those applied to the original design. Where the original personnel are not available, the Engineering Manager shall either assign qualified personnel / consult with ND to identify a new responsible organization for ND activities, and ensure the Engineering Plan, Design Plans and Design Verification Plan are updated.

The Engineering Manager shall ensure the evaluation include the effects of those changes on the constituent parts, delivered items, overall design, and on any design analysis upon which the design is based. The evaluation shall include facility configurations that occur during operations, maintenance, test, surveillance, and inspection activities.

Non-intent design changes initiated from Field Initiated Changes (FICs) shall be approved by the Design Engineer. For all intent design changes, the EC Package shall be revised and approved in the same manner as the original including ND acceptance.

3.4.5 Commercial Grade Dedication

SNC-Lavalin Nuclear shall ensure that controls are established for the Commercial Grade Dedication of purchased items as identified in the Design Specification. SLN shall ensure that all safety-related items are purchased as Basic Components, from suppliers whose quality program has been subject to audit by SLN and through examination of objective evidence has been evaluated to meet applicable requirements of 10 CFR Part 50 Appendix B and ASME NQA-1.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004860

**SNC-LAVALIN
Nuclear****Document Identification****152918-0000-00000-38QP-0001****Revision****00**

Date Effective:

2018.10.18

Page 28 of 73

Title: Bellefonte Project – Quality Assurance Plan

SNC-Lavalin Nuclear shall ensure that the Technical Determinations and records related to Commercial Grade Dedication are appropriately documented and included in the item's History Docket or History File.

3.4.6 Human Factors Engineering

The Human Factors Engineering Program (HFE), 152918-0000-31100-40HF-000x, provides requirements and details on the HF program for the BLN project. HFE plan and HFE preliminary report shall be prepared, during engineering phase, and the HFE report shall be finalized during the commissioning stage

The Human Factor Engineering Program Plan shall be provided to SLN for acceptance during the engineering phase.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 29 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

4 Procurement Document Control

4.1 General Requirements

The procurement of Engineered Items and Services shall be undertaken by SLN and shall comply with SLN's Quality Assurance Program and the 152918-0000-00000-50IM-0001, Materials/Procurement Management Plan, which will include:

- Organizational responsibilities;
- Procurement methods;
- Items and services to be procured;
- Procurement schedule at a summary level.

The Discipline Engineer shall ensure that applicable design basis and other requirements necessary to assure adequate quality shall be included or referenced in documents for procurement of items and services.

For the purpose of this section, Procurement Documentation includes Requests for Quote, Request for Proposal, or Request for Tender, generically referred to as (RFX), and the Purchase Order (PO).

The design and quality requirements for the procured items and services will be defined, documented and provided in accordance with SLN's procedure 2206-07-30-OP-0007, Engineering Quotation Request. It shall comply with the requirements of Section 5.0.

SLN shall perform oversight by means of quality surveillance at the qualified supplier's premises or at site as applicable during the fabrication and manufacturing of Items prior to release for shipment and for Construction Services in accordance with the following SLN operating procedures:

- 2206-06-40-OP-0001, Preparation of Surveillance Plans;
- 2206-06-40-OP-0002, Performance of Quality Surveillance.

Applicable design basis and other requirements necessary to assure adequate quality of procured items and services shall be included or referenced in the procurement documents. According to SLN procedure 2206-06-40-OP-0001 Quality Surveillance Plans are prepared for each Purchase Order based on the following:

Supplier's Inspection and Test Plan (ITP);

- Evaluation of critical quality characteristics of the item;
- Jurisdictional and Code requirements, as applicable;
- Supplier's previous performance in the administration of quality programs and in the supply of items.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 30 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

A Quality Surveillance Record shall be prepared by SLN to document surveillance activities performed. For oversight on other procurement activities not covered by ITPs, a graded approach will be used by SLN and a report using Controlled Form 2206-01-40-CF-0015, Surveillance Report will be filed in Document Control. Supplier Corrective Action Requests shall be issued by SLN for non-conformances found during oversight;

All nuclear pressure boundary items and related services will be procured in compliance with the requirements of NCA-4000.

Non pressure boundary items and related services will be procured in compliance with the applicable quality program category requirements determined during the design phase. Subparts of an assembly or related service may be evaluated by the Design Engineer for the appropriate quality level.

The design and quality requirements for the BLN procured items and services will be defined, documented and provided in accordance with SLN's procedure 2206-07-30-OP-0007, Engineering Quotation Request.

All approved suppliers to SNC-Lavalin shall be on the SLN's or ND's Approved Supplier List (ASL). Each supplier to the SNC-Lavalin shall control its suppliers in accordance with the respective supplier's Quality Assurance Program.

Identification and control of counterfeit, fraudulent and sub-standard materials or items shall be controlled in accordance with the Quality Assurance Program of the organization controlling the purchased items.

The following procedures shall apply for procurement activities undertaken by SLN:

- 2206-07-30-OP-0007, Engineering Quotation Request;
- 2206-06-00-OP-0001, Purchasing Strategy – Project and Customers;
- 2206-06-30-OP-0006, Preparation and Award of Purchase Orders;
- 2206-01-20-OP-0001, Quality Assurance Document Control;
- 2206-06-10-OP-0004, Quality Assurance Evaluation of Tenders;

4.1.1 Procurement Planning

Procurement planning shall start at the early stage of the project. The project procurement planning shall align with engineering planning to ensure that necessary engineering documents are planned, approved and ready when they are required for procurement activities.

The Materials/Procurement Management Plan, 152918-0000-00000-50IM-00xx describes the strategy and procurement processes used by the SNC-Lavalin for the BLN project during the design phase. The plan shall include also requirements for storage, security, screening, maintenance and control of shelf life items.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 31 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

All items procured by SLN shall be delivered to SNC-Lavalin authorized warehouse. 2206-01-30-0P-0009, Receiving Inspection procedure defines SNC-Lavalin's process and requirements for performing the receiving and receiving inspection of supplied items for the BLN Project.

This procedure applies to all items delivered by SNC to SNC-Lavalin Warehouses or designated receiving areas for the BLN Project.

4.2 Content of Procurement Documents

4.2.1 General Requirements

The Buyer shall ensure that procurement documents provided to the supplier adequately describes the item or service to be purchased, including as a minimum, the following:

- Technical requirements as specified in the Engineering Quotation Package (EQP) or Purchase Requisition
- Quality Assurance Program requirements as specified in the Engineering Quotation Package (EQP) or Purchase Requisition
- Commercial Requirements, and
- Terms and Conditions (reviewed and accepted by ND).

The Project Director shall make available the contract information for procurement, engineering and quality assurance activities.

During the tendering process, the technical, quality assurance and commercial requirements will be communicated to a prospective supplier.

At Contract award, the Purchase Order will communicate the technical, quality assurance and commercial requirements to the selected supplier.

The Procurement Manager shall ensure that any changes affecting commercial, technical, or quality requirements are subject to the same degree of control as the original documents.

4.2.2 Scope of Work

The Procurement Manager shall ensure that the Request for Quote includes a statement of the scope of work to be performed by the supplier.

4.2.3 Technical Requirements

Engineering personnel shall ensure that Engineering Quotation Package or Purchase Requisition includes appropriate technical requirements. These requirements shall be documented and specified in an Engineering Quotation Package, as appropriate by reference to specific drawings, specifications, codes, standards, regulations, procedures, instructions, including revisions thereto that describe the items or services to be provided. The documented technical requirements shall include, as appropriate:

- technical performance requirements,
- codes, standards, and specifications,

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004864



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective: **2018.10.18**

Page 32 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- jurisdictional and/or regulatory requirements,
- inspection, test, and acceptance requirements, including any special instructions,
- delivery requirements,
- documentation submittal requirements and the timing of submittals and
- provision for packaging, working, handling, storage and shipping.

4.2.4 **Quality Assurance Program Requirements**

The Buyer shall ensure that purchasing documentation includes appropriate quality assurance program requirements including:

- quality assurance program certification requirements
- ASME Code Edition, addenda, and class of construction
- requirements for acceptance of item or service, procedures, processes, and equipment
- requirements for qualification of personnel
- inspection, test, and acceptance requirements, including any special instructions
- provisions for extending quality assurance requirements to sub-suppliers

4.2.5 **Right of Access**

The Request for Quote and the Purchase Order shall ensure that purchasing documentation includes right of access to the Supplier's and Sub-Suppliers places of work, facilities, and records for surveillance, inspection, or audit by the BLN Project, the Owner, or either's authorized or designated representatives, and if applicable, the ANI I.

4.2.6 **Documentation Requirements**

The Request for Quote or Purchase Order shall identify the documentation required to be submitted for information, review, or acceptance, by SLN or the Owner and the timing of submittals. If the Supplier is required to maintain records, the retention times and disposition requirements shall be included in the Request for Quote or Purchase Order.

4.2.7 **Non-conformances**

The Purchase Order shall require the supplier to report item or service non-conformances and for SLN's acceptance or rejection of the suppliers recommended disposition.

Supplier's Non-conformances (NCRs) for "use as is" or "repair/rework" and Deviation Disposition Request (DDRs) applicable to manufacturing of items are submitted to SLN and processed as per 2206-01-20-OP-0003 Document Control Routines.

4.2.8 **Spare and Replacement Parts**

The Buyer shall ensure that the Purchase Order specifies requirements for spare and replacement parts or assemblies and the related technical and quality assurance requirements for ordering these parts or assemblies.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 33 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

4.3 Procurement Document Review

Procurement Document review shall ensure that the content of Procurement documentation complies with the requirements of Clause 4.2 above.

The Project Procurement Manager shall review the adequacy of specified purchasing requirements contained in Procurement documents, and revisions thereto, prior to issue of Request for Quote or award of Purchase Order. This ensures that Procurement documents, when transmitted, include provisions to assure that items or services shall meet specified requirements. Evidence of this review shall be documented by the Project Procurement Manager's signing the Request for Quote or Purchase Order.

Technical, quality assurance program, or commercial changes required during the Tendering Process shall be evaluated prior to issue of an Addenda to the RFX.

Bid Evaluations shall be performed in accordance with 2206-06-10-OP-0004, Quality Assurance Review of Tenders and 2206-07-30-OP-0010, Technical Tender Evaluation.

Technical or quality assurance program changes made as the result of bid evaluations or negotiations shall be evaluated prior to being incorporated into the Purchase Order and supporting documents (EQP, data sheets, drawings, etc.), prior to Purchase Order award.

4.4 Procurement Document Changes

The BLN Procurement Manager shall ensure that any changes affecting commercial, technical, or quality assurance program requirements are subject to the same degree of control as the original documents.

Applicable Operating Procedures are as follows:

- 2206-01-20-OP-0001 Quality Assurance Document Control
- 2206-06-00-OP-0001 Purchasing Strategy - Projects and Customers
- 2206-06-30-OP-0006 Preparation and Award of Purchase Orders

**SNC-LAVALIN
Nuclear****Document Identification****152918-0000-00000-38QP-0001****Revision****00**

Date Effective:

2018.10.18

Page 34 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

5 Instructions, Procedures and Drawings

All activities affecting quality and services shall be prescribed by and performed in accordance with documented instructions, procedures, or drawings that include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed requirements have been satisfactorily accomplished.

Each activity shall be described to a level or detail commensurate with the complexity of the activity and the need to assure consistent and acceptable results. The need for, and level of detail in, written procedures or instructions shall be determined based upon complexity of the task, the significance of the item or activity, work environment, and worker proficiency and capability (education, training, and experience).

Documents, instructions, procedures, and drawings shall be made available at the point of use to SNC-Lavalin personnel and to the Customer or ANII as required.

The preparation, review, approval, revision, and issue of documents, instructions, procedures and drawings shall be in accordance with this QAP.

Applicable procedures are:

- 2206-01-20-OP-0001 Quality Assurance Document Control
- 2206-07-20-OP-0001 Preparation of Engineering Documents
- 2206-07-00-OP-0001 Drafting Procedure



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 35 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

6 Document Control

6.1 General Requirements

The preparation, review, approval, revision, and issue of documents that specify quality requirements or prescribe activities that affect quality shall be controlled to assure that correct documents are utilized by personnel at the location where activities affecting quality are being performed. All such documents shall be reviewed for adequacy and approved for release by authorized personnel. All documents, software and analytical tools related to the implementation of the Quality Assurance Program shall be controlled.

Documents, including changes, shall be reviewed for adequacy and approved for release by authorized personnel and be distributed to and used at the location where the activity is performed.

SLN's qualified Supplier / Constructor shall meet requirements of their QA Program's Document Control requirements.

6.1.1 Quality Assurance Documentation

The issue, distribution and retention of all project documentation shall be in accordance with 2206-01-20-OP-0003 Document Control Routines.

The preparation, review, approval, revision, issue and retention of Audit Plans, Audit Reports, Audit Checklists, completed Audit files and the Quality Assurance Report shall be controlled by the Director, Quality Assurance.

6.1.2 Engineering Documentation

The issue and retention of project Engineering Documentation shall be in accordance with 2206-01-20-OP-0003 Document Control Routines.

6.1.3 Supplier Documentation

Documentation identified as Supplier deliverables in a Purchase Order shall be formally submitted to the responsible SNC-Lavalin Nuclear Buyer or Expeditor.

The Buyer or Expeditor shall forward this documentation to Document Control for logging into PM+ or MyTRAK as applicable, followed by Vendor Internal Coordination Review which includes acceptance by Quality Assurance and Engineering.

When using MyTRAK, Suppliers shall continue using the PDMCS supplier portal to submit new or revised Supplier document/drawings and retrieve accepted or commented Supplier document/drawings.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004868



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 36 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

6.2 Document Identification and Preparation

Quality Assurance documentation shall be identified in accordance with operating procedure 2206-01-20-OP-0001, Quality Assurance Document Control.

Engineering documentation shall be identified in accordance with operating procedure 2206-01-20-OP-0001 Quality Assurance Document Control. Operating procedure 2206-07-20-OP-0001 Preparation of Engineering Documents shall provide supplementary information on the preparation, review, and approval of Engineering documents.

All controlled documents shall be prepared using standard templates such as Controlled Forms and Template Forms as described in Operating Procedure 2206-01-20-OP-0001, Quality Assurance Document Control.

6.3 Document Changes

Changes to documents shall be reviewed and approved by the same organization that performed the original review and approval, unless other qualified organizations are designated.

The reviewing organization shall have access to pertinent background data or information upon which to base their review and approval.

Revised documents shall be distributed to and used at the location where the activity is performed. Distribution shall be controlled as detailed in clause 6 above.

Applicable Operating Procedures are:

- 2206-01-20-OP-0001 Quality Assurance Document Control
- 2206-01-20-OP-0002 Control of Quality Records
- 2206-01-20-OP-0003 Document Control Routines
- 2206-01-20-OP-0004 Permanent Records History Docket / History File
- 2206-07-20-OP-0001 Preparation of Engineering Documents

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004869



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 37 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

7 Control of Purchased Items and Services

7.1 General Requirements

Procurement activities shall be planned, documented and controlled to assure conformance with procurement documents. Such controls shall provide for the following as appropriate: supplier evaluation and selection, supplier qualification, evaluation of objective evidence of quality furnished by the supplier, source inspection, audit, and examination of items or services upon delivery or completion.

Additional requirements may be specified, depending on the quality assurance specifications or nature of the item or service provided. These additional requirements may include: quality surveillance, quality audits, and additional quality records.

The Project Procurement Manager, who reports to the Project Director, shall be responsible for all procurements activities related to the project. Procurement may be performed by SLN or subcontracted as defined in the Procurement and Subcontract Management Plan.

Procurement activities performed in accordance with 10CFR50 Appendix B, shall meet the requirements of 2206-01912-QM-0001 SNC-Lavalin's Nuclear Quality Assurance Manual and the following supporting procedures;

The following activities shall be undertaken by SLN:

- Perform quality surveillance at supplier's premises during the fabrication and manufacturing of items prior to release for shipment in accordance with the following SLN operating procedures: 2206-06-40-OP-0001, Preparation of Quality Surveillance Plans and 2206-06-40-OP-0002, Performance of Quality Surveillance; The extent of quality surveillance varies with the scope of contracted services and location of the services;
- Perform receiving inspection of Engineered Items and services upon receiving of the items at designated deliver location in accordance with operating procedure 2206-01-30-OP-0009, Receiving Inspection.

The following Operating Procedures shall be used to control items and services purchased by SLN:

- 2206-01-40-OP-0004, Performance of Audits;
- 2206-06-30-OP-0003, Evaluation and Selection of Suppliers ;
- 2206-01-40-OP-0010, Evaluation of Supplier Quality Program Manuals;
- 2206-06-40-OP-0001, Preparation of Surveillance Plans;
- 2206-06-10-OP-0004, Quality Assurance Evaluation of Tenders;
- 2206-06-30-OP-0006, Preparation and Award of Purchase Orders;

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004870



SNC-LAVALIN
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 38 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- 2206-07-20-OP-0001, Preparation of Engineering Documents;
- 2206-01-20-OP-0003, Document Control Routines;
- 2206-01-20-OP-0004, Permanent Records History Docket / History File;
- 2206-06-40-OP-0002, Performance of Quality Surveillance;
- 2206-06-70-OP-0002, Supplier Performance Evaluation;
- 2206-01-30-OP-0002, Control of Nonconforming Items and Services.

The requirements for execution of purchasing activities are specified in the Project Materials/ Procurement Management Plan, 152918-0000-0000-50IM-000.

7.2 Procurement Planning

Overall Procurement (procurement) planning process shall include:

- requirements for preparation, revision, review, approval, and issue of procurement documents
- evaluation and selection of suppliers
- bid evaluation and award
- supplier control
- verification of purchased items or services which may include: source surveillance, surveillance, inspection, test, or audit
- control of supplier non-conformances and corrective actions
- release of items
- acceptance of items or services
- quality assurance records

The procurement requirements for a project shall be specified in the Project Execution Plan (PEP) or Project Management Plan.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004871



SNC-LAVALIN
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 39 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

The Project Execution Plan (PEP) shall be prepared by the Project Manager in accordance with operating procedure 2206-04-00-OP-0001, Project Management. Depending on the complexity and extent of supply-chain activities, the Director, Procurement may elect to supplement the Project Execution Plan (PEP) with a specific Project Procurement Plan (PPP). In either case, the Project Execution Plan (PEP) or Project Procurement Plan (PPP) shall identify long lead items or major purchases listed in the Contract between SNC-Lavalin Nuclear and the Customer. It shall also identify any customer specific procurement requirements over and above the requirements of this Quality Assurance Manual.

Procurement cannot proceed until the Project Execution Plan (PEP) is issued.

Supply Chain activities shall be initiated by the receipt of either an Engineering Quotation Package (EQP) or a Purchase Requisition. The preparation of these documents is controlled in accordance with Section 4, Procurement Document Control.

When procurement of items or services is undertaken by SNC-Lavalin, this activity shall be performed in accordance with 2206-06-00-OP-0001, Purchasing Strategy- Projects and Customers. The design and quality requirements for the procured items and services shall be defined, documented and provided as input to the procurement process.

Procured materials/items are controlled and verified by performing the following activities:

Surveillance activities at suppliers are performed in accordance with 2206-06-40-OP-0002 Performance of Quality Surveillance.

Receiving inspection is performed as per the procedure 2206-01-30-OP-0009 Receiving Inspection.

Quality Surveillance applies to nuclear and non-nuclear items and services for nuclear power plants facilities purchased from Suppliers.

- 2206-06-40-OP-0002 Performance of Quality Surveillance applies to the following scope:
- For the performance of inspection activities based on the Inspection and Test Plan(s) submitted by the supplier and accepted by SNC-Lavalin Nuclear;
- For the performance of verification activities by SNC-Lavalin Nuclear to ensure procedural compliance by a supplier (for any applicable nuclear life cycle activity) while executing work to their QA Program.
- The extent of quality surveillance varies with the scope of contracted services and location of the services. Applicable procedures are 2206-01-40-OP-0009 Evaluation of Supplier NDE Test and 2206-01-40-OP-0008 Evaluation of Inspection and Test Plans.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004872



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 40 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

The Quality Assurance Specialist shall meet the following mandatory requirements when preparing the Quality Surveillance Plan and executing Quality Surveillance activities;

- Procedures, instructions or drawings shall be reviewed to verify that they have been accepted by SLN. These documents shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed requirements have been satisfactorily accomplished.

Personnel qualification records shall be reviewed and accepted prior to the individual performing any activity. Qualification records shall include;

- i) NDE qualification records
- ii) Welder qualification records
- iii) Inspection personnel qualification records
- iv) Test personnel qualification records

7.3 Supplier Evaluation and Selection

7.3.1 Supplier Evaluation for Bid Purpose

Buyer initiates Bidders List from an Engineering Quotation Request (EQR) or Purchase Requisition to identify potential supplier(s) for the item or service to be purchased.

Quality Assurance Specialist validates the potential supplier(s) Quality Assurance Program consistent with the quality requirements as defined in the EQR or Purchase Requisition. For each potential supplier, this is accomplished by review of one or more of the following:

Status on the SLN Approved Suppliers List [based on an approved Controlled Form 2206-06-30-CF-0003, Supplier Qualification Record (SQR)]

- Certificates of Authorization
- Quality Program Manual

ASME Code work shall be subcontracted to N Type Certificate Holders and Approved Suppliers for Design software only.

Results of the Supplier evaluation shall be documented on a Bidders List by the Quality Assurance Specialist as either "Acceptable" or "Not Acceptable" to submit a Tender Package to the potential Supplier. In addition, the potential Supplier shall be added to the Approved Suppliers List by the Quality Assurance Specialist as a minimum "Qualified to Bid" if not already listed.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 41 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

7.3.2 Supplier Evaluation Prior to Purchase Order Award

On receipt of a Bid, Commercial, Technical and Quality Assurance evaluations of the Bid are initiated by the Buyer by submitting copies of the Bid Documentation to a Discipline Engineer and a Quality Assurance Specialist for their respective evaluations.

The Buyer must check that the Supplier is listed on the Approved Suppliers List as "Qualified to Award" for the specified Quality Assurance Program and scope of supply.

If the Supplier is not listed on the Approved Suppliers List as "Qualified to Award" or the scope of work is different, the Buyer initiates the preparation or revision of supplier qualification records.

7.4 Bid Evaluation

The Procurement Manager shall establish and implement processes for Bid evaluation and Award of Contract. These processes shall ensure that the basis for evaluations, selections and award of contract are documented.

The Bid evaluation shall consider technical, quality and commercial aspects

Technical Evaluation is accomplished by a Tender Technical Evaluation (TTE) performed by a Discipline Engineer to ensure that the tender complies with the technical requirements of the procurement documents. This may include evaluation and disposition of exceptions and deviations from the procurement documents.

Quality Evaluation is accomplished by the Quality Assurance Evaluation (QAE) performed by a Quality Assurance Specialist to ensure that the tender complies with the quality requirements of the procurement documents. This may include evaluation and disposition of exceptions and deviations from the procurement documents.

Commercial Evaluation is accomplished by the Commercial Evaluation (CE) performed by the Buyer to ensure that the tender complies with the commercial requirements of the procurement documents. This may include evaluation and disposition of exceptions and deviations from the procurement documents.

In addition to the above mentioned requirements, where applicable to the type of procurement, and as identified in the Project Execution Plan (PEP) the following items shall also be considered:

- suppliers key personnel
- suppliers production capability
- suppliers past performance

The Buyer is responsible for coordinating evaluations and selection of the successful bid.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004874



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 42 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

Bid evaluations shall confirm a supplier's ability:

- accreditation, or capability of accreditation by relevant authorities or where applicable, acceptance of the supplier quality program by SNC audit, for the supply of product or service with applicable standards, codes, or jurisdictional requirements, and
- the product or service offered meets appropriate commercial, quality and technical requirements including: safety, reliability and maintainability.
- Prior to contract award, any exceptions or unacceptable conditions with respect to item or service requirements such as those listed in clause 4.2, or commercial considerations that are identified during bid evaluation shall either be resolved or the Supplier shall commit to resolve unacceptable conditions.
- Contract award documentation shall identify any changes to the Tender documents commercial, technical or quality requirements as a result of bid evaluations or pre-contract negotiations and shall contain or reference all product requirements as listed above.

7.5 Qualification of Suppliers

The Buyer initiates the supplier qualification process by communicating the requirements to qualify a supplier to the Quality Assurance Specialist using the 2206-06-30-CF-0003, Supplier Qualification Record.

The Supplier Qualification Record shall identify the required scope of qualification, items or services to be provided, and the associated quality assurance program requirements.

The Project Quality Assurance Specialist shall evaluate Supplier's capability to provide items or services in accordance with the requirements of the Supplier Qualification Record.

A Quality Assurance Specialist shall evaluate a Supplier's capability to provide items or services in accordance with the requirements of the Supplier Qualification Record. Supplier audits shall be performed to assess the effectiveness of their Quality Assurance Program.

Once qualified, the Quality Assurance Specialist shall complete 2206-06-30-CF-0003 Supplier

Qualification Record and add the supplier on the Approved Supplier List.

The Project Manager, Quality Assurance shall ensure the qualifications of supplier listed in the Approved Suppliers List and active for BLN project are reviewed, maintained and updated on a periodic basis.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004875



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective:

2018.10.18

Page 43 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

7.6 Control of Supplier Generated Documents

The Project Procurement Manager shall implement appropriate controls to assure that the submittal and evaluation of supplier generated documents are accomplished. These controls shall provide for the receipt, processing, and recorded evaluation of the supplier generated documents. This evaluation shall consider the quality assurance, technical, and commercial requirements in support of acceptance of the item or service.

Documentation received by the Buyer from suppliers for acceptance shall be reviewed and accepted by qualified personnel. The Buyer shall initiate the review of supplier generated documents in accordance with operating procedure 2206-01-20-OP-0003, Document Control Routines.

7.7 Acceptance of Items or Services

7.7.1 General Requirements

The Project Quality Manager, as delegated by the SLN Director, Quality, shall ensure that purchased items or services conform to specified requirements. The type and extent of control applied to the supplier and purchased product shall be dependent upon the:

- impact on safety,
- complexity of the structure, system, component or service,
- degree of standardization,
- similarity to previously proven design,
- reliability requirements,
- performance or functional requirements,
- applicable regulatory or jurisdictional requirements.

Quality Assurance Specialists shall perform item or service acceptance activities. The procurement documents shall specify that prior to the item or service being offered for acceptance, the Supplier shall verify that the item or service being furnished complies with the requirements of the procurement documents.

Acceptance activities may be performed at the supplier's premises or the customer's premises.

The Quality Assurance Specialist shall review a Certified Material Test Report (CMTR) or Data Report to the ASME BPVC, Section II and Section III, and additional requirements of the ASME Code.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004876



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 44 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

7.7.2 Methods of Acceptance

SLN shall utilize one or more of the following methods to accept an item or service from a supplier:

- a certificate of conformance provided by the supplier,
- source verification,
- receiving inspection,

The preferred method of acceptance is source verification where receiving inspection is not practical. Certificates of Conformance may only be used for items manufactured and delivered for simple, standard catalogue items, best commercial items and spare parts.

Notwithstanding the above, a receiving inspection shall be performed by the Receiving Quality Control Inspector Quality Assurance Specialist.

7.7.3 Certificate of Conformance

SLN shall implement appropriate processes to verify the validity of a supplier's certificates of conformance and the effectiveness of this process shall be evaluated during supplier audit, monitoring, or independent inspection and test of the material or equipment. Such audit, monitoring, or independent inspection activities shall be conducted by SLN at intervals commensurate with the supplier's past quality performance.

7.7.4 Source Verification

The Quality Assurance Specialist shall perform source verification at intervals consistent with the importance and complexity of the item or service, and shall include monitoring, witnessing, or observing selected activities as per 2206-06-40-0P-0002 Performance of Quality Surveillance. The Surveillance Plan shall identify the supplier's inspections, examinations, or tests at predetermined points for which the Quality Assurance Specialist requires to inspect.

Surveillance Plans are not required to be submitted to the ANI.

Results of inspections, examinations, or tests shall be documented by the supplier and shall be reviewed by SLN prior to acceptance of the item or service. The Quality Assurance Specialist sign-off on the Surveillance Plan indicates his acceptance of the inspection activity.

7.7.5 Receiving Inspection

The Operating Procedure 2206-06-30-0P-0001 Storage and Handling applies to items under the custody and control of SLN at a Storage Facility / Warehouse. Project-specific plans or procedures shall define how the material control system will be implemented to comply with technical document requirements, regulatory requirements and Codes and Standards requirements.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004877



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 45 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

[Note: 2206-06-30-OP-0001 Storage and Handling does not apply if the storage and handling of items is sub-contracted by a project to a qualified Supplier / Constructor in accordance with the Project Quality Plan. In such cases, the qualified Supplier / Constructor shall implement their own Quality Assurance (QA) Program and SLN shall perform surveillance / oversight for the verification of their procedural compliance using 2206-06-40-OP-0002, Performance of Quality Surveillance].

2206-01-30-OP-0009 Receiving Inspection applies to all receiving inspection activities performed by SNC-Lavalin Nuclear and shall consider prior source verification.

Inspection Personnel performing receiving inspection activities will be qualified in accordance with 2206-01-40-OP-0012 Inspection Personnel - Qualification Requirements.

Receiving QC Inspector shall perform receiving inspection on purchased items to ensure conformance to procurement documents.

Items that conform to the specified requirements shall be identified as such (accepted) and either held in storage for later release or released and moved directly to their final location for subsequent processing or use.

Items that do not conform to specified requirements shall be identified as nonconforming and shall be segregated to prevent inadvertent processing or use.

7.7.6 Post Installation Testing

When post installation testing is utilized, SLN shall establish post installation testing requirements, including required documentation to support product acceptance, with the product supplier

7.7.7 Acceptance of Services Only

SLN shall accept services by using one or more of the following methods:

- technical verification of the data produced,
- surveillance and/or audit of the activity,
- review of objective evidence for conformance to the procurement document requirements.

7.8 Control of Supplier Non-Conformance

All NCRs generated by suppliers and dispositioned as "Use as is" or "Repair" shall be reviewed for acceptance by SLN. Following methods are recommended to be used for controlling supplier non-conformance:

- evaluation of nonconforming items,
- review of supplier submitted non-conformance reports including supplier recommended disposition (use-as-is or repair) and technical justification. Non-conformances to the procurement requirements or SLN approved documentation, which consist of one or more of the following, shall be submitted to SLN for approval of the recommended disposition:

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004878



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 46 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- deviations from technical or material requirements;
- deviations from approved requirements for supplier documentation;
- non-conformance which cannot be corrected by continuation of the original manufacturing process or by rework;
- the item does not conform to the original requirements even though the item can be restored to a condition such that the capability of the item to function is unimpaired;
- evaluation and disposition of the supplier recommendation;
- verification of the implementation of the disposition;
- maintenance of records of supplier submitted non-conformance.

Non-conformances to design requirements dispositioned as use-as-is, rework or repair shall be subject to design control measures commensurate with those applied to the original design. Required as-built records shall reflect the use-as-is or repair condition.

In all cases, disposition of a supplier non-conformance cannot negate the requirements of the ASME Code. SNC-Lavalin review and acceptance is required prior to performing any repair or re-examination activities.

If the repairs are likely to affect the results of examination, inspection or tests, or work previously completed, appropriate re-examination, re-inspection, and re-testing shall be performed in accordance with approved procedures.

The Supplier has responsibility to identify nonconforming items by legible marking, tagging, or other methods not detrimental to the item, either on the item or on the container, or the package containing the item.

7.9 Commercial Grade Items and Services

The Commercial Grade Items and Services shall only be applied to non-pressure-boundary safety-related items.

Where SNC-Lavalin's nuclear design utilized commercial grade items, SNC-Lavalin Nuclear performs the same as per 2206-C1-50-OP-0002 Dedication of Commercial Grade Items.

**SNC-LAVALIN
Nuclear**Document Identification**152918-0000-00000-38QP-0001**Revision**00**

Date Effective:

2018.10.18

Page 47 of 73

Title: Bellefonte Project – Quality Assurance Plan

7.10 Purchase Order Administration

The Project Procurement Manager shall establish and implement appropriate controls for the administration of contracts and purchase orders.

Any changes affecting commercial, technical, or quality requirements proposed either by SLN, the customer, or a supplier, shall be documented and approved in accordance with the original document.

The Project Procurement Manager shall track and record supplier performance and retain hardcopies of this information in the applicable supplier history file for future reference. Electronic copies of this information may be stored in an electronic database.

7.11 Purchase Order Completion

The Procurement Manager shall establish and implement a close-out process for termination of contract agreements following acceptance of items or service or for cause.

The procedure 2206-06-70-OP-0001, Purchase Order Completion applies.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004880



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 48 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

8 Identification and Control of Items

8.1 General Requirements

Identification and control of items shall ensure that:

- only correct and accepted items are used and installed
- identification is maintained on the item or in documents traceable to the item, or in a manner which ensures that identification is established and maintained.

The Project Quality Manager shall establish controls to assure that only correct and accepted items are used and installed.

8.2 Identification Methods

8.2.1 Item Identification

The Quality Assurance Specialist performing source surveillance and the Receiving QC Inspector shall identify items by tags, physical markings or documentation traceable to the item. Any marking applied to an item shall be clear, legible and not adversely affect the material, function or service of the item.

Records demonstrating unique identification of each item, or part thereof, shall be maintained as part of HD/HF (History Docket / History File). Where traceability is a requirement for purchased items, the procurement documents shall include requirements to control and record a unique identification of each item, or part thereof, and maintain records.

8.2.2 Physical Identification

Physical identification shall be used to the maximum extent possible. Markings shall be clear and permanent and shall not adversely affect the material, function or service life of the item so identified. Where physical identification on the item is either impractical or insufficient, physical separation, procedural control, or other appropriate means shall be employed. In such cases, the item must be included in records traceable to the item.

Any physical identification or marking applied to the item, shall not be hidden or obliterated by surface treatment or coating unless other means of identification are provided in accordance with documented procedures.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004881



SNC-LAVALIN
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 49 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

8.3 Specific Requirements

8.3.1 Identification and Traceability of Items

Quality Assurance Specialists shall ensure that identification and traceability requirements of applicable standards, codes, or specifications are applied as required to ensure traceability to heat, batch, lot, part number, serial number, specified inspection, test or other records as required by the EQR and PO.

Customer specified requirements for identification and traceability of items shall be documented in EQR and applicable technical specifications.

8.3.2 Limited Life Items

Limited Life Items shall be handled in accordance with Storage and Handling Procedure which is to be written.

8.3.3 Maintaining Identification of Stored Items

The BLN Project shall ensure that appropriate controls are implemented for maintaining item identification consistent with the planned duration and conditions of storage in accordance with the Material Control Plan, which is to be written.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004882



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 50 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

9 Control of Processes

The scope of SLN's Certificate of Authorization requires fabrication and installation activities to be subcontracted to an appropriate ASME Certificate of Authorization holder. The controls for special processes will be the responsibility of the qualified Supplier subcontracted to perform fabrication and installation.

BLN project shall review and accept Supplier procedures in accordance with this section for welding, heat treating, and non-destructive examination to ensure compliance with the ASME Code, 10 CFR Part 50 Appendix B, ASME NQA-1, and Customer specified requirements.

9.1 Process Control

The Project Director shall ensure that the processes are controlled through the use of an Inspection and Test Plan (ITP) as applicable.

For all work subcontracted to qualified suppliers the Quality Assurance Specialist shall review and accept the supplier's Inspection and Test Plans as per the Operating Procedure 2206-01-40-OP-0008, Evaluation of Inspection and Test Plans.

Inspection and Test Plans shall include, but not limited to the following:

- identify required Verification, Witness and Hold points,
- the signature, initials, or stamp, and the date the activity was performed by the Quality Assurance Specialist,
- the signature, initials, or stamp, and the date the activity was performed by the Certificate Holders representative,
- the signature, initials, or stamp, and the date on which those activities were witnessed by the Authorized Nuclear Inspector (ANI),
- space for the signature, initials, or stamp, and the date the activities were witnessed by the Customer, as required,
- document number and revision to which the process conforms,
- space for reporting results of completion of specific operations,
- document number and revision to which the examination and test is to be performed, and
- space for recording results of examinations and tests.

The supplier is responsible to submit the Inspection and Test Plan to the SNC-Lavalin Document Control (for QA and Engineering review) as well as to the Authorized Nuclear Inspector (ANI) for acceptance and identification of their Hold or Witness points; prior to the start of fabrication and or installation.

Quality Assurance Specialists and Discipline Engineers with appropriate knowledge and experience shall evaluate Supplier submitted procedures related to Inspection and Test Plans.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004883



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 51 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

9.2 Special Processes

Upon receipt of procedures for special processes (such as Welding, Heat Treatment, Non-Destructive Examination (NDE) etc.) SLN Document Control shall log them into PM+ or MyTRAK as applicable, followed by Vendor Internal Coordination Review which includes acceptance by Quality Assurance and Engineering.

9.2.1 Welding Procedures

The SLN qualified Supplier / Constructor shall ensure that welding is controlled in accordance with the Supplier's Quality Assurance program. Welding controls shall address;

- Weld Procedure Specification
- Procedure Qualification Records
- Welder Performance Qualification
- Weld Material Control
- Recording of Welding Data

Welding Procedure Specifications and Procedure Qualification Records shall be submitted to SLN for review and acceptance. Welding procedures shall meet the technical requirements as specified in the Modification Packages as appropriate.

9.2.2 Heat Treatment Procedures

The SLN qualified Supplier / Constructor shall ensure heat treatment is controlled in accordance with the Supplier / Constructor's Quality Assurance program. Heat treatments include;

- Pre-heat temperature control
- Post-heat temperature control
- Post Weld Heat Treatment control

Heat Treatment procedures shall be submitted to SLN for review and acceptance. Heat Treatment procedures shall meet the technical requirements as specified in the Modification Packages as appropriate.

Welding inter-pass temperature control shall be performed in accordance with the Weld Procedure Specification.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 52 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

9.2.3 Nondestructive Examination Procedures

The SLN qualified Supplier / Constructor's Nondestructive Examination procedures shall be reviewed and accepted by a Quality Assurance Specialist and Discipline Engineer in accordance with operating procedure 2206-01-40-OP-0009 Evaluation of Supplier NDE Procedures.

The SLN qualified Supplier / Constructor shall ensure Nondestructive Examination shall be performed and controlled in accordance with the subcontractors accepted Quality Assurance program.

The subcontractor shall ensure that;

- NDE procedures are approved by a Level III and qualified in accordance with ASME Section III and Section V.
- NDE personnel are qualified in accordance with a written practice compliant with ASNT Recommended Practice Nos. SNT-TC-1A and/or CP-189, as appropriate
- NDE personnel are qualified in accordance with the requirements of clause 2.1.1.

The subcontractor shall be responsible for specifying NDE requirements in procedures or instructions and submitted to SLN for review and acceptance.

9.2.4 Special Processes Not Covered by Existing Codes and Standards

Special processes procedures or instructions not covered by existing codes and standards, or where quality requirements specified for an item exceed those of existing codes or standards, shall be reviewed and accepted by a SLN Quality Assurance Specialist and SLN Discipline Engineer as necessary.

The review shall ensure that the necessary requirements for qualifications of personnel, procedures, or equipment are specified or referenced in the procedures or instructions.

Records shall be maintained for the currently qualified personnel, processes and equipment of each special process.

9.2.5 Source Surveillance on Special Processes

Project Quality Assurance Specialists shall perform source surveillance on activities performed by Suppliers as per procedure 2206-06-40-OP-0002 Performance of Quality Surveillance.



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective:

2018.10.18

Page 53 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

10 Inspection

10.1 General Requirements

Quality Assurance Specialists shall ensure that inspections required to verify conformance of an item or activity to specified requirements, or continued acceptability, are executed. Characteristics subject to inspection and inspection methods shall be specified. Inspection results shall be documented. Quality Assurance Specialists shall confirm that inspection for acceptance shall be performed by qualified persons other than those who performed or directly supervised the work being inspected.

10.2 Inspection Requirements

Quality Assurance Specialists shall ensure that inspection requirements and acceptance criteria include specified requirements contained in the applicable design documents and where required, accepted by the customer.

10.3 Inspection and Hold Points

Quality Assurance Specialists shall ensure that specific hold points are indicated in the Inspection and Test Plan. In addition, work shall not be allowed to proceed beyond specified hold points unless consent to waive the specified hold point is obtained and recorded prior to continuation of work beyond the designated hold point.

10.4 Inspection Planning

10.4.1 Planning

Quality Assurance Specialists shall ensure that the characteristics to be inspected, methods of inspection, and acceptance criteria are identified during the inspection planning process. For items stamped with the ASME Certification Mark, an Inspection and Test Plan in conjunction with a Surveillance Plan shall be prepared by a Quality Assurance Specialist. Where SLN is purchasing a completed item, a Surveillance Plan is sufficient to document inspection planning requirements.

10.4.2 Sampling (Non ASME Work)

Quality Assurance Specialists shall ensure that sampling procedures, when used, are based upon valid statistical methods and contain reference to governing standards. Statistical techniques are not used other than in the sampling plans identified in 2206-01-30-OP-0009 Receiving Inspection.

10.5 In Process Inspection

Quality Assurance Specialists shall ensure that the inspection of items under fabrication, installation, or otherwise in-process is performed by the qualified supplier and as indicated in the Surveillance Plan. If inspection of processed items is impossible or disadvantageous, Quality Assurance Specialists shall observe the fabricator or installer's use of indirect control or monitoring of processing methods, equipment, and personnel.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004886



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 54 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

Both inspection and process monitoring shall be provided when control is inadequate without both.

10.6 Final Inspections

10.6.1 Resolution of Non-conformance

Quality Assurance Specialists shall ensure that final inspections include a record of review of the results and resolution of non-conformance identified by prior inspections. Non-conformances shall be resolved in accordance with Clause 0.

10.6.2 Inspection Requirements

Quality Assurance Specialists shall ensure that completed items are inspected for completeness, markings, calibration, adjustments, protection from damage, or other characteristics as required to verify the quality of the item and conformance of the item to specified requirements.

10.6.3 Modifications, Repairs, or Replacement

Quality Assurance Specialists shall ensure that any modifications, repairs, or replacements, of items performed subsequent to final inspection shall require re-inspection and re-test, to verify acceptability

10.7 Records

Quality Assurance Specialists shall ensure that records are established, maintained, and as a minimum, identify the following:

- the item inspected,
- date of inspection,
- procedure number and revision level for the activity,
- Quality Assurance Specialist,
- type of observation,
- results or acceptability, and
- reference to information on action taken in connection with non-conformances.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004887



SNC-LAVALIN
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 55 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

11 Test Control

11.1 General Requirements

Tests required to verify conformance of an item to specified requirements and to demonstrate satisfactory performance for service shall be planned and executed. Characteristics to be tested and test methods to be employed shall be specified. Test results shall be documented and their conformance with acceptance criteria shall be evaluated. 2206-06-40-0P-0002 Performance of Quality Surveillance is the applicable procedure.

11.2 Test Requirements

The Quality Assurance Specialist shall ensure that all test requirements are appropriately planned and controlled. Test requirements shall be documented in a Surveillance Plan listed on the Inspection and Test Plan. Inspection and Test Plans provided to SLN by a supplier of an item or service shall be accepted in accordance with Clause 9.

Controls applied to Inspection and Test Plans shall include:

- Test requirements and acceptance criteria shall include as appropriate: prototype qualification tests, production tests, proof tests prior to installation, construction tests, pre-operational tests, operational tests, and computer program tests such as software verification and validation, factory acceptance tests, site acceptance tests, and in-use tests.
- Required test shall be controlled under appropriate environmental conditions using tools and equipment necessary to conduct the test in a manner to fulfill test requirements and acceptance criteria. The tests performed shall obtain the necessary data with sufficient accuracy for evaluation and acceptance.
- Test requirements and acceptance criteria shall be based upon specified requirements contained in applicable approved design documents, or other pertinent technical documents.
- If temporary changes to the approved configuration of a facility are required for testing purposes, approval by the design authority is required prior to performing the test.

11.3 Test Procedures

The requirements of this section do not apply to the testing of computer programs, computer hardware or computer operating systems. Quality Assurance Specialist shall ensure that test procedures include the following, as appropriate:

- Test configuration and test objectives, provisions for assuring prerequisites and suitable environmental conditions are met and adequate instrumentation is available and used, and necessary monitoring is performed. Prerequisites shall include the following, as applicable: calibrated instrumentation, appropriate equipment, trained personnel, condition of test equipment and the item to be tested, suitable environmental conditions, and provision for data acquisition.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004888



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 56 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- As an alternative to (a) above, appropriate sections of related documents, such as ASTM or IEEE methods, supplier manuals, equipment maintenance instructions, or approved drawings or travelers with acceptance criteria, can be used.

11.4 Performance of the Component Pressure Test

The component pressure test shall be subcontracted and performed by the supplier fabricating the item. The test requirements and acceptance criteria shall be included in procurement documents.

The Quality Assurance Specialist performing source verification shall be responsible for supervising, witnessing, and accepting the pressure test with ANI involvement.

The Quality Assurance Specialist shall ensure that the test is controlled in accordance with a documented procedure accepted by SLN and the suppliers' approved Quality Assurance Program.

11.5 Test Results

The Quality Assurance Specialist shall ensure that test results are documented and evaluated by the supplier, the ANI, or Customer, to assure that test requirements have been satisfied prior to signing the supplier's pressure test report.

11.6 Test Records

The Quality Assurance Specialist shall ensure that component pressure test records are established and maintained to indicate the ability of the item to satisfactorily perform its intended function or to meet its documented requirements. The Component test record shall identify the following:

- Item tested;
- Date of test;
- Test personnel
- Type of observation;
- Test Procedure and revision used;
- Results and acceptability;
- Action taken for any deviations noted;
- Person evaluating test results;
- Action taken in connection with any deviations, and
- Gauges or instrument identification.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004889

**SNC-LAVALIN**
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 57 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

11.7 Certification of ASME Code Data Report and Application of Certification Mark

The Project Engineering Manager shall determine when the Data Report for the Code item is required to be registered with the National Board of Boiler and Pressure Vessel Inspectors at 1055 Crupper Avenue, Columbus, Ohio 43229-1183 from the Customer's purchase order document requirements.

ASME Code Data Reports shall be included in the History Docket as lifetime (permanent) records in accordance with 2206-01-20-0P-0004, Permanent Records – History Docket - History File. All Data Reports and referenced records shall be available to the ANI and enforcement authority having jurisdiction at the location of the nuclear power plant site.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004890



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 58 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

12 Control of Measuring and Test Equipment

12.1 General Requirements

Tools, gages, instruments, and other measuring and test equipment used for activities affecting quality shall be controlled, calibrated at specific periods, adjusted and maintained to required accuracy limits.

Calibration and control measures may not be required for rulers, tape measures, levels, and other such devices, if such equipment provides adequate accuracy.

Periodic checks of equipment to check calibration is required. New measuring and test equipment shall be calibrated prior to use and registered in the calibration log

2206-01-30-0P-0016 Control of Measuring and Test Equipment (M&TE) applies to all Tools, Gauges and instruments and other M&TE under the control of SLN. The Quality Assurance Specialist is responsible for selecting M&TE of the correct type, range, accuracy and tolerance to accomplish the function of determining conformance to specified quality requirements and to review and accept calibration records from supplier of calibration services.

12.2 Selection

The organization performing the work activity shall be responsible for selection of measuring and test equipment to assure that such equipment is of proper type, range, accuracy, and tolerance to accomplish the required measurements for determining conformance to specified requirements. The process shall be controlled in accordance with the organization's Quality Assurance Program performing the work.

12.3 Calibration and Control

Calibration and control of Measuring and Test Equipment shall be in accordance with the applicable Quality Assurance Program of the entity responsible for the work

During surveillance or audit of the calibration services supplier, Quality Assurance Specialists shall ensure that documented calibration procedures include appropriate controls for measuring and test equipment.

Measuring and test equipment shall be traceable to its application and use. When measuring and test equipment are found to be out of calibration, an evaluation, shall be made and documented including the validity of previously inspection or test results and the acceptability of items previously inspected or tested. Appropriate action shall be taken on the equipment and any affected items including removing the measuring and test equipment from service and quarantining any affected items.

Measuring and test equipment shall be properly handled and stored in accordance with 2206-06-30-0P-0001 Storage and Handling

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004891

**SNC-LAVALIN**
Nuclear**Document Identification****152918-0000-00000-38QP-0001****Revision****00**

Date Effective:

2018.10.18

Page 59 of 73

Title: **Bellefonte Project – Quality Assurance Plan****12.4 Records**

Measuring and test equipment shall be suitably marked, tagged, labeled, or otherwise identified to indicate calibration status and establish traceability to calibration records. Status indicators must be inspected prior to use to ensure that only calibrated measuring and test equipment is used.

12.5 Calibration Services

Suppliers providing calibration services shall be qualified in accordance with SLN Operating Procedure 2206-06-30-0P-0003 Evaluation and Selection of Suppliers

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004892



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective: **2018.10.18**

Page 60 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

13 Handling, Storage and Shipping

Handling, storage, cleaning, packaging, shipping and preservation of items shall be controlled to prevent damage or loss and to minimize deterioration. 2206-06-30-OP-0001 Storage and Handling applies for the control of storage and handling to preserve items from the time of their receipt to prevent their damage, deterioration, or loss when in the custody and control of SNC-Lavalin Nuclear Inc. (SLN).

Items can come under the custody of SLN through a number of methods as follows:

- From a supplier against a SLN purchase order;
- As 'free issue' from a Customer or Owner;
- Returned by a SLN qualified constructor / supplier after completion of work.

Procurement personnel are responsible for receiving and the Quality Assurance Specialist shall perform receiving inspection in accordance with operating procedure 2206-01-30-OP-0009, Receiving Inspection.

Engineering shall specify special instructions related to preventing damage or loss, or minimizing item deterioration, equipment and material in EQRs, Technical Specifications and Drawings. Such requirements for handling, storage and preservation of SLN purchased items shall be defined in technical documents prepared in accordance with operating procedure 2206-07-20-OP-0001, Preparation of Engineering Documents by the Discipline Engineer. The technical documents shall consider the need for any special equipment (such as containers, shock absorbers, and accelerometers) and/or special protective environments (such as inert gas atmosphere, specific moisture content levels, and temperature levels).

When items are to be free-issued to SLN, the Project Manager shall ensure the requirements are specified by the item's owner and those requirements are incorporated into project plans. All items shall be controlled from their receipt, through handling, storage and preservation (as required), until released for installation, to prevent their abuse, misuse, deterioration, or loss of means of identification.

The control of storage and handling must ensure the following:

- Items are preserved from the time of their receipt to prevent their damage, deterioration or loss;
- Inspections are performed periodically and their results documented to ensure storage areas and the integrity of the items is maintained, as required;
- Appropriate instructions are available and implemented for any items requiring special handling or special tooling and equipment;
- Any special handling tools and equipment required are inspected and tested at specified times to verify they are adequately maintained.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004893



SNC-LAVALIN
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 61 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

14 Inspection and Test Status

14.1 General Requirements

The status of inspection and test activities shall be identified either on the items or in documents traceable to the items where it is necessary to assure that required inspections and tests are performed and to assure that items which have not passed the required inspections and tests are not inadvertently installed or used.

SLN Operating Procedure 2206-01-30-0P-0017 Inspection and Test Status describes the process to ensure that required inspections and tests are performed on items and to ensure that those that have not passed the required inspections and tests are not inadvertently installed, used, or operated. The status of inspection and test activities shall be identified either on the items or in documents traceable to them. The procedure applies to items while under the direct control of SNC-Lavalin Nuclear Inc. The procedure does not apply to items while under the control of SLN qualified suppliers including fabricators / constructors.

14.2 Status

SNC-Lavalin Nuclear ensures that the inspection and test status of items shall be indicated using the following methods:

- Application of a Status Tag;
- On the Inspection and Test Plan (ITP) or inspection records traceable to the item;
- At the Storage Location.

Upon request by project site personnel responsible for receiving, the Quality Assurance Specialist performs Receiving Inspection and uses the controlled form 2206-01-30-CF-0010, Receiving Report in accordance with 2206-01-30-0P-0009, Receiving Inspection.

In order to ensure that items that have not passed the required inspections and tests are not inadvertently installed or used, controls are in place to use status indication tags at the following stages at a project site warehouse:

- Receiving Inspection Stage;
- Handling and Storage Stage.

The Quality Assurance Specialist has the responsibility to perform receiving inspection in accordance with 2206-01-30-0P-0009, Receiving Inspection and apply, maintain and remove status indicators as required by this procedure.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 62 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

15 Control of Nonconforming Items and Services

15.1 General Requirements

Item and process non-conformances that do not conform to specified requirements are controlled to prevent inadvertent use or installation or use. The controls shall provide for identification, documentation, evaluation, segregation when practical, and disposition of the nonconforming items, and for notification to the affected organizations.

Non-conformances shall be documented using Reporting Problems and Taking Action (ProAct) system as documented in ProAct Procedure, NU-912020-PRO-001. The ProAct nonconformance shall be sufficiently detailed to allow proper review, evaluation, and disposition by authorized personnel. The review, evaluation, and disposition shall be in accordance with the ProAct procedure to ensure that the nonconforming characteristics are reviewed and a recommended disposition is proposed and approved.

The Project Quality Assurance Manager shall ensure that work delivered to the jurisdiction of the United States of America, in accordance with ASME NQA-1, 10 CFR Part 50 - Appendix B, and 10 CFR Part 21 nonconformance reporting shall include:

- notification of the nonconformance to the Nuclear Regulatory Commission in a timely manner, in compliance with the statutory reporting requirements
- appropriate training for all personnel involved in such work of the statutory reporting requirement of the Nuclear Regulatory Commission
- posting of contact information for the Nuclear Regulatory Commission in conspicuous areas of the project office

SLN's qualified Supplier / Constructor shall process non-conformances as per their QA Program. Supplier's non-conformance/concessions and exceptions for dispositions for "use as is" or "repair/rework" to SLN through Document Control for acceptance as per 2206-01-20-OP-0003 Document Control Routines. The Technical Justification to support the recommendation shall be provided by SNC-Lavalin engineering as required. Nonconforming items shall be evaluated and recommended dispositions shall be proposed.

Further processing, delivery, installation, or use of a nonconforming item shall be controlled pending the evaluation and an approved disposition by authorized personnel. Personnel performing evaluations to determine a disposition shall have demonstrated competence in the specific area they are evaluating, have adequate understanding of the requirements and have access to pertinent background information.

Any BLN Project personnel can identify an undesirable condition. The initial report shall be sufficiently detailed to allow for proper review evaluation and disposition. The Quality Manager shall evaluate the condition to determine if a Nonconformance Report is warranted.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004895



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective:

2018.10.18

Page 63 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

16 Corrective Action

16.1 General Requirements

The Project Quality Assurance Manager shall ensure conditions adverse to quality are promptly identified and corrected. In the case of a significant condition adverse to quality, the cause of the condition shall be determined and corrective action taken to prevent recurrence.

16.2 Corrective Action

Any SNC-Lavalin Nuclear project employee can identify an undesirable condition. The Director, Quality Assurance shall ensure that all such identified conditions are subject to screening and further processed in accordance with the Reporting Problems and Taking Action through ProAct Procedure, NU-912020-PRO-001. Any BLN Project personnel can identify an undesirable condition adverse to quality. The process and documentation of conditions adverse to quality shall be in accordance with the organization's Quality Assurance Program who identified the condition.

Significant conditions adverse to quality are defined as follows:

- Conditions that could adversely impact health and safety of the public or environment;
- Conditions that could have a significant impact on reliability, availability, or maintainability of the equipment or facility;
- Conditions that could individually fall within the 'not significant' classification, but have been identified as recurring adverse conditions as a result of trend analysis;
- Based on judgment, the Quality Manager decides to classify a condition as significant that could otherwise be classified as not significant..

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004896



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 64 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

16.3 Supplier Corrective Action Request

Anytime the SNC-Lavalin discovers conditions adverse to quality associated with activities performed by suppliers, the Quality Manager shall ensure corrective action is requested using controlled form 2206-01-40-CF-0009, Supplier Corrective Action Request.

Anytime a Supplier / Constructor discovers conditions adverse to quality associated with activities performed by them or their sub-supplier, the Quality Manager shall ensure corrective action is requested, as required, by the Supplier / Constructor's QA Plan.

For each adverse audit finding, the Lead Auditor shall fill out section I of the Controlled Form 2206-01-40-CF-0009, Supplier Corrective Action Request and issue to the Supplier for a response in accordance with 2206-01-40-OP-0004, Performance of Audits.

Applicable Procedures

- NU-912020-PRO-001, Reporting Problems and Taking Action through ProAct
- 2206-01-30-OP-0004 Stop Work Order
- NU-905010-PRO-001 Customer Feedback
- 2206-07-30-OP-0004 Corrective Action for Design Errors
- 2206-01-30-OP-0013 Causal Analysis
- NU-904010-PRO-001 Lessons Learned

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004897



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 65 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

17 Quality Assurance Records

17.1 General Requirements

All Quality Assurance records shall be indexed as soon as practical as the project executes by the Document Control Manager and controlled in accordance with 2206-01-20-OP-0002, Control of QA Records. These controls shall apply to the: generation, identification, authentication, storage, maintenance, and disposition, of quality assurance records. Requirements and responsibilities for these activities shall be documented.

Quality assurance records may be in any medium such as, paper hard copy, magnetic, electronic or optical computer disc, photograph, or any combination thereof. The customer and Authorized Nuclear Inspector shall be provided with access to quality assurance records at all times.

17.2 Generation of Records

Quality assurance records shall be complete, legible, and traceable to the associated items and activities and accurately reflect the work accomplished or information required.

Records to be generated, supplied, or maintained shall be specified in quality assurance program documents, such as design specifications, procurement documents, and test procedures.

17.3 Authentication of Records

Documents shall be considered valid records only if stamped, initialed, or signed and dated by authorized personnel.

Corrections to documents shall be reviewed and approved by the responsible individuals from the originating or authorized organizations

Electronic documents shall be authenticated as appropriate, with identification on the media, or authentication information contained within or linked to the document itself.

Following authentication, the quality assurance record shall be submitted to the Manager, Document Control for population of the index and storage.

17.4 Classification

Records shall be classified as permanent or non-permanent by the owner or his agent when authorized.



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 66 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

17.5 Receipt, Control and Retention of Records

Records shall be retained in accordance operating procedure 2206-01-20-OP-0002, Control of QA Records.

Documented procedures shall be established for the receipt, transmittal, authentication and documenting of quality records submitted to the BLN Project by external organizations.

Radiographs shall not be reproduced.

17.6 Storage

The Manager, Document Control shall establish records storage facilities in compliance with requirements of this section of the QAP, at the earliest practical time. The operating procedure 2206-01-20-0002, Control of QA Records shall include the following requirements:

- A description of the storage area
- The filing system to be used
- A method for verifying that records received are in agreement with the transmittal document and that record received are legible
- Verifying that the records are those designated
- Records access
- Process for tracking records removed from the records storage facility
- Methodology for filing supplemental information and identifying and disposing of superseded records
- Protocol for records disposal

Records shall be stored in facilities, container, or a combination thereof, constructed and maintained in a manner which protects them from loss, deterioration, destruction or damage from the following:

- natural disasters such as winds, floods, or fires,
- environmental conditions such as high and low temperatures including humidity,
- infestation of insects, mold, or rodents.

The Manager, Document Control shall implement dual facilities. Records shall be maintained in a hard copy format and an electronic format as identified in 2206-01-20-OP-0002, Control of QA Records remote from each other to eliminate the chance exposure to a simultaneous hazard.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004899



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 67 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

17.7 Retention

At the end of the retention period, non-permanent records exceeding their retention period may be destroyed as authorized by the Senior Vice-President, Operations, and the Director, Quality Assurance.

17.8 Maintenance of Records

Records shall be complete, remain legible, readily identifiable, retrievable, and traceable to the item or activity to which they refer. Records shall be protected against loss, theft or deterioration by one or more of the following means:

- fire resistant file cabinets;
- environmental controls applied to records storage areas;
- offsite storage of duplicate files;
- back-up of electronic files.

Changes to records shall be controlled by documented procedures. Additional controls will be applied to records from special processes such as radiographs, photographs, negatives, microfilm, and magnetic and optical media, to prevent damage from excessive light, stacking, electromagnetic fields, temperature, and humidity.

17.9 Records Turnover

SLN shall maintain all permanent and non-permanent records while in their possession.

All permanent records resulting from procurement activities are compiled in HD/HF and provided to Operations for acceptance prior releasing items for site installation.

All Design Engineering Changes (EDC) have been processed as per agreement with ND.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004900



SNC-LAVALIN
Nuclear

Document Identification		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 68 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

18 Audits

18.1 General Requirements

The BLN project conducts internal audit and supplier audits at planned intervals to verify whether the Quality Assurance Program:

- conforms to the documented requirements,
- conforms to the requirements of applicable standard and codes,
- for internal audit and independent assessments,
 - i) conforms to the requirement of this QAP and supporting Quality Assurance Manuals
 - ii) is effectively implemented and maintained, and
- for external audit, conforms to the Quality Assurance Program requirements established by a supplier.

In addition to the above requirements, internal and external audits will also consider assessment of objective evidence that final item meets specified requirement

Operating procedure 2206-01-40-OP-0004, Performance of Audits, defines the responsibilities and requirements for planning and conducting audits, independent assessments, establishing records, and reporting results.

All personnel shall be qualified in accordance with BLN Project's Quality Assurance Program.

The BLN Project will not utilize third party audits provided by an external organization, as a basis for supplier qualification.

For each adverse audit finding, the Lead Auditor shall fill out section I of the Controlled Form 2206-01-40-CF-0009, Supplier Corrective Action Request and issue to the Supplier for a response in accordance with 2206-01-40-OP-0004, Performance of Audits.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004901



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 69 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

19 Bellefonte Deferred Construction Permit

19.1 General Requirements

The SNC-Lavalin Bellefonte Quality Assurance Plan describes the top level policy that assigns major functional responsibilities for activities conducted by or for Nuclear Development's Bellefonte Units 1 and 2 (BLN) while the construction permits for the units remain in deferred status. The QAP describes the methods and establishes the administrative control requirements that meet applicable 10 CFR 50, Appendix B requirements, NRC Generic Letter 87-15, "Policy Statement on Deferred Plants," and the BLN 1 & 2 construction permits as reinstated in accordance with the terms of the NRC order reinstating the BLN Units 1 & 2 construction permits, dated March 9, 2009.

This section is developed to take into account the unique requirements and commitments necessary to ensure effective quality assurance program implementation and oversight of BLN 1 & 2.

The execution and accountability for quality assurance for the BLN 1 & 2 units remains with SNC-Lavalin, but may be delegated to support contractors for specific tasks and activities. Contracted activities are implemented through a SNC-Lavalin approved contractor Nuclear Quality Assurance Manual (NQAM) or may be implemented through direct implementation of the SNC-Lavalin QA program through SNC-Lavalin procedures. SNC-Lavalin's review and approval of a contractor NQAM, and any changes thereto, ensures that regulatory requirements and SNC-Lavalin specific commitments of this QAP are met. SNC-Lavalin retains and exercises the overall responsibility for the establishment and execution of an effective QA program for BLN 1 & 2.

Procedures and instructions that implement the requirements of the QAP are developed prior to commencement of those activities and are reviewed and approved by SNC-Lavalin.

19.2 Scope/Applicability for Current Activities Deferred Plant Status

This section applies to BLN 1 & 2 plant activities while ND Development, LLC evaluates, maintains and preserves the units for the consideration of possible reactivation of construction and completion activities. SNC-Lavalin will take the actions necessary to maintain and preserve the units in order to maintain the option of plant reactivation in accordance with Generic Letter 87-15, "Policy Statement on Deferred Plants" and the terms of the NRC order reinstating the BLN Units 1 & 2 construction permits, dated March 9, 2009.

Basic guidelines for activities conducted at Bellefonte during this period are listed below:

- No physical work which advances construction status will be performed and no completion credit will be taken for any asset preservation activities performed.
- Physical work on permanent plant SSCs will be limited to work necessary for maintenance and preservation of plant assets.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004902



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 70 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

- The construction configuration management tool, Engineering/Construction Monitoring and Documentation system (ECM&D) will not be modified to reflect advancement of construction status.
- The ECM&D will be modified to reflect correct status of equipment , e.g., ECM&D status will be changed to remove completion status that is not consistent with current plant construction status (examples: where a component was previously installed , but subsequently removed by investment recovery(IR) activities; or lifting of a previously landed lead during maintenance related activities).
- The BLN ASME Section III "N" stamp has been surrendered, and the ASME QAM is not active.. If active construction is resumed, the ASME Section III program will be re-established, most likely by an Engineering, Procurement and Construction (EPC) contractor. Should an ASME code system require maintenance or modification to support operation or PM activities required while in deferred status, configuration control records will be modified to reflect work done where existing QA records are invalidated. Additionally, work performed on ASME systems will be identified for future use and evaluation in re-establishing the ASME Section III QA program.
- Most material purchased to perform maintenance and PM program activities while in deferred status will be procured to commercial standards and will be installed using procedure, Control of Temporary Installation or Omission (TIO) process. Some material may be procured to applicable quality requirements for future use in permanent plant applications should active construction be resumed.
- No activities which will require NDE are expected to be performed during deferred plant status however informational NDE for the purpose of Detailed Scoping Estimating Planning (DSEP) may be performed.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004903



SNC-LAVALIN
Nuclear

Document Identification

152918-0000-00000-38QP-0001

Revision

00

Date Effective:

2018.10.18

Page 71 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

19.3 Organization

The following sections describe the reporting relationships, functional responsibilities, and authorities for organizations implementing and supporting the Nuclear Quality Assurance Program as it applies to BLN Units 1 & 2 in a terminated or deferred plant status.

19.3.1 Bellefonte Owner, Nuclear Development

The Bellefonte Owner is responsible for ensuring all requirements associated with the Bellefonte Deferred Construction permit are met. The Owner may delegate the specific responsibilities to the SNC-Lavalin Engineering, Procurement and Construction Management (EPCM) organization provided they maintain a 10CFR Appendix B QA program with attendant independent oversight performed by the SNC-Lavalin Quality Assurance organization.

19.3.2 Chief Nuclear Officer, SNC-Lavalin Nuclear (CNO)

The CNO is responsible for SNC-Lavalin's programs and projects which include all aspects of design, construction and operation of the Bellefonte nuclear plants. The CNO is also responsible for all technical and administrative support activities provided by SNC-Lavalin and contractors.

19.3.3 Project Director, BLN Project

The SNC-Lavalin Bellefonte Project Director responsible for the BLN Project, reports to the SNC-Lavalin CNO, and is responsible for the overall implementation of the project, ensuring the quality assurance requirements in the areas specified by this QAP for BLN 1 and 2 plant activities are met.

19.3.4 Director, Quality Assurance SNC-Lavalin Nuclear

The Director, Quality Assurance, is responsible for ensuring that the SNC-Lavalin BLN QA organization is sized commensurate with assigned duties and responsibilities. This is accomplished through the use of a dedicated and experienced QA organization performing oversight activities both onsite and offsite.

The SNC-Lavalin Nuclear Quality Assurance organization is responsible for independently planning and performing audit activities to verify the effective implementation of the QAP described in this document for BLN 1 and 2 activities including, but not limited to engineering, QA/QC, licensing, document control, corrective action program, and procurement that support retention of the deferred construction permit for BLN-1 and 2.

The Director, Quality Assurance shall review results of all completed audits, ensure findings are properly documented and shall review results of the audit with the Bellefonte Owner, ND.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004904



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 72 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

19.4 Deferred Permit Procedures

During the period that BLN units 1 & 2 remain in terminated or deferred status as described in Generic Letter 87-15, "Policy Statement on Deferred Plants" the Quality Assurance elements described in this section and the body of the QAP will be accomplished through written, reviewed and approved procedures. At minimum, procedures shall be in place for the following activities;

19.4.1 Organization

Roles and Responsibilities of the organization shall be defined.

19.4.2 QA Program

QA Plan shall contain the QA organizational roles and responsibilities, equipment covered by the QA plan shall be identified and personnel performing work and audits shall be trained and qualified.

19.4.3 Document and QA Record Control

Documents shall be retained with processes in place for configuration control, including any procurement related documents.

19.4.4 Corrective Action Program

Any corrective actions adverse to quality shall be maintained in Corrective Action program.

19.4.5 Material Storage and Handling

Procedures shall be in place to ensure material, parts and equipment is procured, stored and handled correctly with provisions for non-conformance also contained in procedures.

19.4.6 Equipment Maintenance

Procedures, instructions and drawings shall be in place to ensure that any maintenance performed on plant equipment is conducted properly, measuring and test equipment properly maintained and calibrated, and equipment is properly identified and controlled. Records associated with maintenance shall be retained including any test or inspection reports or results.

Site procedures that were not used in the period of deferral before the construction permits were withdrawn and placed in inactive status. As activities necessary to consider the viability of construction completion are required, the applicable procedures will be reactivated, reviewed and reissued prior to the conduct of the activity.

19.4.7 Site Security

Program providing controls for general access to site.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004905



SNC-LAVALIN
Nuclear

<u>Document Identification</u>		Revision
152918-0000-00000-38QP-0001		00
Date Effective:	2018.10.18	Page 73 of 73

Title: **Bellefonte Project – Quality Assurance Plan**

19.5 Audits

Periodic audits to ensure all required for maintaining the deferred construction permit shall be conducted on a frequency of at least annually. The audits shall be performed by qualified and appropriately trained QA personnel. Problems including conditions adverse to quality are documented through the corrective action program.

The results of assessments are documented and reported to appropriate levels of management in the ND and SNC-Lavalin organizations.

Records maintain sufficient detail to provide adequate documentation of assessed activities. Follow up verifications or additional assessments may be conducted as necessary to ensure that required corrective action has been taken.

The audit will evaluate the following:

- Construction Permit and Deferred Status Activities – evaluate for reasonable assurance that activities authorized by the permit are in compliance
- Quality Assurance Program Requirements – evaluate the QA plan requirements for implementation and adequacy of records, documents and procedures. Verify the implementation and overall effectiveness of the QA plan.
- Maintenance and Equipment Preservation Activities – verify the established measure to control maintenance and equipment preservation in plant deferred status
- Corrective Action - verify established measures in place to control non-conformances, deficiencies and conditions adverse to quality

19.6 Plant Equipment Policy

An important factor in considering the viability of construction reactivation and completion includes the impact of equipment age on its continued suitability for use. Considerations regarding age degradation due to design life, outdated or obsolete equipment, design improvements, any impact associated with resource recovery activities, and economic feasibility to replace rather than preserve equipment indefinitely under a lay-up program must be taken into account given the age of certain existing equipment. For these reasons, in August 2003, the Tennessee Valley Authority (TVA) submitted, and in May 2004 the NRC approved a change to the QAP that allowed preventive maintenance to be terminated on selected equipment and to allow that equipment to be entered into the corrective action program as "deferred equipment". SNC-Lavalin procedure controls prohibit and will continue to prohibit "deferred equipment" from being used in nuclear safety related applications without further evaluation and having been fully restored or replaced.

Structures, systems or components that have been affected in the course of resource recovery activities will likewise be entered in to the corrective action program and prohibited from being returned to service without evaluation and having been restored or replaced.

NOTICE: This document is "Confidential Information" as defined in the purchase agreement ("the Agreement") between SNC-Lavalin USA Nuclear Inc. (SLN), and Nuclear Development, LLC. (ND). Any disclosure of this Confidential Information must be made pursuant to the terms of the Agreement.

ND_004906

**APPLICATION FOR ORDER APPROVING
CONSTRUCTION PERMIT TRANSFERS
AND
CONFORMING CONSTRUCTION PERMIT AMENDMENTS**

**ATTACHMENT 2
CONSTRUCTION PERMIT (CHANGES)**

**Bellefonte Nuclear Plant, Unit 1
NRC CONSTRUCTION PERMIT NO. CPPR-122
DOCKET NO. 50-438**



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

TENNESSEE VALLEY AUTHORITY NUCLEAR DEVELOPMENT, LLC
DOCKET NO. 50-438
BELLEFONTE NUCLEAR PLANT, UNIT 1
CONSTRUCTION PERMIT

Construction Permit No. CPP22

1. The Atomic Energy Commission (the Commission) Having found that:
 - A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;
 - B. The ~~Tennessee Valley Authority~~ Nuclear Development, LLC (the applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
 - C. Such further technical or design information ~~may~~ be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;
 - D. Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;
 - E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria ~~defined~~ in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

ND_004908

- 2 -

- F. The applicant is technically qualified to design and construct the proposed facility;
 - G. The applicant is financially qualified to design and construct the proposed facility;
 - H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 50, Appendix D of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated December 23, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant for a utilization facility designed to operate at 3600 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon the application. The facility, known as the Bellefonte Nuclear Plant, Unit 1 will be located on the applicant's site in Jackson County, Alabama.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the conditions specified or incorporated below:
- A. The earliest date for the completion of the facility is June 1, 1979, and the latest date for completion is October 1, 2011 2029.
 - B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.
 - C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and

Amended by NRC Order dated March 4, 2003

ND_004909

**APPLICATION FOR ORDER APPROVING
CONSTRUCTION PERMIT TRANSFERS
AND
CONFORMING CONSTRUCTION PERMIT AMENDMENTS**

**ATTACHMENT 3
CONSTRUCTION PERMIT (CLEAN)**

Bellefonte Nuclear Plant, Unit 1

**NRC CONSTRUCTION PERMIT NO. CPPR-122
DOCKET NO. 50-438**



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NUCLEAR DEVELOPMENT, LLC
DOCKET NO. 50-438
BELLEFONTE NUCLEAR PLANT, UNIT 1
CONSTRUCTION PERMIT

Construction Permit No. CDP-22

1. The Atomic Energy Commission (the Commission) Having found that:
 - A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;
 - B. The Nuclear Development, LLC (the applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
 - C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;
 - D. Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;
 - E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

- 2 -

- F. The applicant is technically qualified to design and construct the proposed facility;
 - G. The applicant is financially qualified to design and construct the proposed facility;
 - H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 50, Appendix D of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated December 23, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant for a utilization facility designed to operate at 3600 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon the application. The facility, known as the Bellefonte Nuclear Plant, Unit 1 will be located on the applicant's site in Jackson County, Alabama.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the conditions specified or incorporated below:
- A. The earliest date for the completion of the facility is June 1, 1979, and the latest date for completion is October 1, 2029.
 - B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.
 - C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and

Amended by NRC Order dated March 4, 2003

ND_004912

**APPLICATION FOR ORDER APPROVING
CONSTRUCTION PERMIT TRANSFERS
AND
CONFORMING CONSTRUCTION PERMIT AMENDMENTS**

**ATTACHMENT 4
CONSTRUCTION PERMIT (CHANGES)**

**Bellefonte Nuclear Plant, Unit 2
NRC CONSTRUCTION PERMIT NO. CPPR-123
DOCKET NO. 50-439**



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

TEENESSEE VALLEY AUTHORITY NUCLEAR DEVELOPMENT, LLC
DOCKET NO. 50-439
BELLEFONTE NUCLEAR PLANT, UNIT 2
CONSTRUCTION PERMIT

Construction Permit No. CPFR23

1. The Atomic Energy Commission (the Commission) having found that:
 - A. The application for construction permit complies with the requirements of the Atomic Energy Act 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;
 - B. The ~~Tennessee Valley Authority~~ Nuclear Development, LLC (the applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
 - C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;
 - D. Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;
 - E. On the basis of the foregoing, there is ~~is~~ reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

- 2 -

- F. The applicant is technically qualified to design and construct the proposed facility;
 - G. The applicant is financially qualified to design and construct the proposed facility;
 - H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against, environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 50, Appendix D of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated December 23, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant for a utilization facility designed to operate at 3600 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon the application. The facility, known as the Bellefonte Nuclear Plant, Unit 2 will be located on the applicant's site in Jackson County, Alabama.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the conditions specified or incorporated below:
- A. The earliest date for the completion of the facility is March 1, 1980 and the latest date for completion is October 1, ~~2014~~ 2029.
 - B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.
 - C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and

Amended by NRC Order dated March 4, 2003

ND_004915

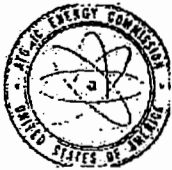
**APPLICATION FOR ORDER APPROVING
CONSTRUCTION PERMIT TRANSFERS
AND
CONFORMING CONSTRUCTION PERMIT AMENDMENTS**

ATTACHMENT 5

CONSTRUCTION PERMIT (CLEAN)

Bellefonte Nuclear Plant, Unit 2

**NRC CONSTRUCTION PERMIT NO. CPPR-123
DOCKET NO. 50-439**



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NUCLEAR DEVELOPMENT, LLC
DOCKET NO. 50-439
BELLEFONTE NUCLEAR PLANT, UNIT 2
CONSTRUCTION PERMIT

Construction Permit No. CPPRI23

1. The Atomic Energy Commission (the Commission) having found that:
 - A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;
 - B. The Nuclear Development, LLC (the applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
 - C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;
 - D. Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;
 - E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

- 2 -

- F. The applicant is technically qualified to design and construct the proposed facility;
 - G. The applicant is financially qualified to design and construct the proposed facility;
 - H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against, environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 5, Appendix D of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated December 23, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant for a utilization facility designed to operate at 3600 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon the application. The facility, known as the Bellefonte Nuclear Plant, Unit 2 will be located on the applicant's site in Jackson County, Alabama.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the conditions specified or incorporated below:
- A. The earliest date for the completion of the facility is March 1, 1980 and the latest date for completion is October 1, 2029.
 - B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.
 - C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and

Amended by NRC Order dated March 4, 2000

ND_004918

DEPOSITION EXHIBIT

83

52 FR 38077-01, 1987 WL 154407(F.R.)
RULES and REGULATIONS
NUCLEAR REGULATORY COMMISSION
10 CFR Part 50

Commission Policy Statement on Deferred Plants

Wednesday, October 14, 1987

*38077 AGENCY: Nuclear Regulatory Commission.

ACTION: Final policy statement.

SUMMARY: This statement presents the policy of the Nuclear Regulatory Commission (NRC) with regard to the procedures that apply to nuclear power plants while in a deferred status and when they are being reactivated. The regulations and guidance applicable to deferred and terminated plants; maintenance, preservation, and documentation requirements; and the applicability of new regulatory requirements and other general administrative considerations are addressed.

EFFECTIVE DATE: November 13, 1987.

FOR FURTHER INFORMATION CONTACT: Theodore S. Michaels, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone (301) 492-8251.

SUPPLEMENTARY INFORMATION:

I. Background

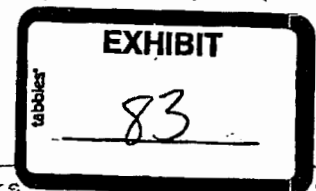
On March 16, 1987, the Commission published a proposed policy statement on deferred plants in the Federal Register for a 30-day comment period (52 FR 8075). Five commenters offered a total of nine comments on the proposed policy statement. The Commission has modified the policy statement in section III of this notice in response to comment B(1) in section II below. In addition, some minor editorial changes were made.

II. Response to Public Comments on the Proposed Policy Statement

A. KMC, Inc.

Summary of Comment. KMC, Inc. and the Utility Safety Classification Group recommended that the term "safety-related" be substituted for the term "important to safety" in sections III.B.2.a and III.B.2.b because there is not yet a clear definition of the latter term.

Commission Response. The Commission rejects this suggestion. The term "safety-related" is a subset of the term "important to safety." Safety-related is more precisely defined at this time because licensees provide a list of structures, systems, and components that come within its scope. However, there is sufficient Commission guidance regarding the term "important to safety" to warrant its use without causing confusion. For example, the Commission has indicated that while there is not "a predefined class of equipment at every plant whose functions have been determined by rule to be 'important to safety,' * * * whether any piece of equipment has a function 'important to safety' is to be determined on the basis of a particularized showing of clearly identified safety concerns * * *, and the requirements of * * * GDC 1 must be tailored to the identified safety concerns." Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), CLI-84-9, 19 NRC 1323, 1325 (1984); see also Shoreham, ALAB-788, 20 NRC 1102, 1115-1119 (1984).



Case 5:18-cv-01983-LCB Document 86-34 Filed 10/14/20 Page 81 of 100
Commission Policy Statement on Deferred Plants, 52 FR 38077-01

In the context of this policy statement, it is expected that a utility, planning to maintain its reactivation option or transfer of ownership to others, will identify any structures, systems, and components (SSC) which are important to safety and establish appropriate maintenance, preservation, and documentation (MPD) for these SSC. If a utility determines, based on an analysis of cost-effectiveness, to develop MPD only for safety-related SSC, it must recognize the possibility that SSC for which adequate MPD were not developed may have to be replaced if and when reactivation or transfer of ownership takes place.

The NRC does not want to limit its application of MPD requirements to safety-related SSC because that could allow other SSC, which are important to safety, to be placed into service without proper MPD.

B. Washington Public Power Supply System (WPPSS)

Summary of Comments. WPPSS submitted the following three comments:

(1) The commenter recommended that the requirement in section III.A.6.e (incorrectly referred to by the commenter as 6.c) be amended. This item requires that a listing of any new applicable regulatory requirements that are made effective during the deferral period be submitted with a description of the licensee's proposed plans for compliance with these requirements. The commenter suggests that this presumes a sufficient level of engineering activity during the deferral period to develop such plans. Since this might not be the case, the commenter asks that the requirement be changed to permit a commitment to submit this information at a specific later date.

Commission Response. This change has been made. However, it should be noted that this information should be submitted at the time of reactivation notification, or as soon thereafter as possible, since the lack of this information could impact the review schedule.

(2) The commenter recommended that the requirement in section III.A.6 to notify the NRC at least 120 days before construction resumes be changed to "at least 120 days before construction is expected to resume or as soon as possible after a reactivation decision has been reached." This would permit some construction activities to get under way earlier.

Commission Response. The 120-day advance notification is the minimum period required to evaluate the licensee's submittal to determine the acceptability of reactivation. Any request by the licensee to resume selected non-safety-related activities sooner than 120 days will be considered at the time of the request.

(3) This comment refers to section III.A.6.i, which requires an amendment to the Final Safety Analysis Report (FSAR), as applicable and necessary, discussing the bases for all substantive site and design changes made since the last amendment. The commenter states that, in its specific case, such an amendment would not be available at the time of initial notification. The commenter believes that since no substantive site and design changes will *38078 be made during deferral, an FSAR amendment would not be needed at that time.

Commission Response. The amendment is required only if there are substantive changes. If there are none, no amendment is necessary. Therefore, the commenter's concern is satisfied by the text in the proposed policy statement.

C. The State of Washington Energy Facility Site Evaluation Council

Summary of Comments. The following three comments were made:

(1) The commenter suggested that the policy clearly state, early on, that it applies only to facilities deferred or terminated during construction.

Commission Response. The intent of the policy statement is made clear throughout the document. Deferral and termination refer to construction, not operation. No further clarification is needed.

(2) The commenter expressed concern that the definition of a terminated plant might cause confusion because it requires a valid construction permit, whereas the only authorized activity is site restoration.

Commission Response. The reference to a valid construction permit in the definition for a terminated plant is not a requirement; it merely identifies the status of a plant that fits the definition. A plant is considered to be in terminated status only from the time the licensee has announced that construction has been permanently stopped until the construction permit is formally withdrawn by the NRC. The licensee of a deferred plant, on the other hand, retains the construction permit because construction has only been deferred, not terminated.

(3) The commenter suggested that the Commission might wish to address circumstances of abandonment and cessation of operation, which the commenter had recently adopted in its rules.

Commission Response. These areas go beyond the intended scope and purpose of the subject policy statement. These matters are being addressed in the Commission's decommissioning rulemaking.

D. Marvin Lewis

Summary of Comment. The commenter suggested that deferral of cancellation often provides a cover for inadequate quality or other very dangerous conditions and that the NRC must handle resumption of construction "sternly" and with "extreme prejudice," requiring that all the latest safety requirements be met.

Commission Response. The proposed policy statement stresses clearly and repeatedly that deferral, termination, and reactivation will be subject to all applicable current regulations, standards, policies, and guidance. No further clarification is needed.

E. Atomic Industrial Forum

Summary of Comment. The commenter supported the proposed policy statement and did not suggest changes to its text.

Commission Response. None required.

III. Policy Statement

This policy guidance outlines (1) the NRC's regulatory provisions for deferring and preserving a deferred nuclear power plant until such time as it may be reactivated and (2) the applicability of new regulatory staff positions to a deferred plant when it is reactivated. Moreover, because of the possibility that the plant and/or its equipment may be sold to another utility, some general guidance with regard to terminated plants is presented.

The following definitions apply to this policy guidance:

"Deferred plant" means a nuclear power plant at which the licensee has ceased construction or reduced activity to a maintenance level, maintains the construction permit (CP) in effect, and has not announced termination of the plant.

"Terminated plant" means a nuclear power plant at which the licensee has announced that construction has been permanently stopped, but which still has a valid CP.

A. Deferred Plant

The following areas should be addressed by the licensee and the NRC when a plant is deferred:

1. Notification of Plant Deferral

The licensee should inform the Director of Nuclear Reactor Regulation (NRR) when a plant is to be deferred within 30 days of the decision to defer. Information to be made available should include the reason for deferral, the expected plant reactivation date (if known), whether a CP extension request will be submitted, and the plans for fulfilling the requirements of the CP, including the maintenance, preservation, and documentation requirements as outlined in Section III.A.3 of this policy statement.

2. Extension of Construction Permit

The licensee must ensure that its CP does not expire. Title 10 of the Code of Federal Regulations, § 2.109 (10 CFR 2.109), "Effect of Timely Renewal Application," provides that if a request for renewal of a license is made 30 days before the expiration date, the license will not be deemed to have expired until the application has been finally processed. Extension of the completion date for a CP will be considered in accordance with 10 CFR 50.55(b).

3. Maintenance, Preservation, and Documentation of Equipment

The NRC requirements for verification of construction status, retention and protection of records, and maintenance and preservation of equipment and materials are applied through: 10 CFR 50.54(a), "Conditions of Licenses," and 10 CFR 50.55(f), "Conditions of Construction Permits," which require that a quality assurance program be implemented; 10 CFR Part 50, Appendix B, which requires that all activities performed to establish, maintain, and verify the quality of plant construction be addressed in the licensee's quality assurance program; 10 CFR Part 50, Appendices A and B, which require that certain quality records be retained for the life of the plant; 10 CFR 50.55(e), which requires reporting of deficiencies in design, construction, quality assurance, etc.; 10 CFR 50.71, which applies to the maintenance of records; and 10 CFR Part 21, which applies to reporting of defects and noncompliance. Those NRC regulatory guides that endorse the ANSIN45.2 series of standards, "Quality Assurance Requirements for Nuclear Power Plants," also are applicable and include Regulatory Guides 1.28, 1.37, 1.38, 1.58, 1.88, and 1.116.[FN1] Of particular importance is the guidance on packaging, shipping, receiving, storing, and handling of equipment as well as on collecting, storing, and maintaining quality control documentation. The maintenance, preservation, and documentation requirements outlined above apply to plants under construction.

The licensee may choose to modify existing commitments during extended construction delays by developing a quality assurance plan that is commensurate with the expected activities and expected (or potential) length of delay. The licensee should discuss with the NRC the expected construction delay period and the quality assurance program to be *38079 implemented during the deferral. The program should include a description of the planned activities; organizational responsibilities and procedural controls that apply to the verification of construction status, maintenance, and preservation of equipment and materials; and retention and protection of quality assurance records. The program will be reviewed and approved by the NRC in accordance with 10 CFR 50.54(a)(3), 10 CFR Part 50, Appendix B, and inspection procedures, as appropriate.

Implementation of the program will be examined periodically to determine licensee compliance with commitments and overall program effectiveness.

4. Conduct of Review During Deferral

When a plant is deferred, the staff will normally bring all ongoing post-CP and operating license (OL) reviews and associated documentation to an appropriate termination point. Normally, new reviews will not be initiated. If the review has progressed sufficiently, a safety evaluation report (SER) will be issued, which assembles and discusses the status of the completed work and lists all outstanding open items. Subject to availability of resources, the staff might perform specific technical reviews or complete SER supplements.

5. Applicability of New Regulatory Requirements During Deferral

Deferred plants of custom or standard design will be considered in the same manner as plants still under construction with respect to applicability of new regulations, guidance, and policies. Proposed plant-specific backfits of new regulatory staff positions promulgated while a plant is deferred will be considered in accordance with the Commission backfit criteria. Other modifications to previously accepted staff positions will be implemented either through rulemaking or generic issue resolution, which themselves are subject to the backfit rule. Regulations that have integral update provisions built into them will be applied to deferred plants, as they are to other plants under construction, without the use of the backfit rule.

Provisions in other policy statements that are applicable to plants under construction also will have to be implemented. Any resulting backfit recommendations will have to be supported in accordance with 10 CFR 50.109. Appeals procedures applicable to plant-specific backfits would be applicable to deferred plants. Appeals filed by a licensee during plant deferral will be considered and processed by the NRC while a plant is in a deferred status.

6. Information to be Submitted by Licensee When Reactivating

The licensee should submit a letter to the Director of NRR at least 120 days before plant construction is expected to resume. The letter should include the following information, to the extent that the information has not been submitted to the staff during the deferral period:

- a. The proposed date for resuming construction, a schedule for completion of the construction, and a schedule for submittal of an operating license application, including a final safety analysis report (FSAR), if one has not already been submitted.
- b. The current status of the plant site and equipment.
- c. A description of how any conditions established by the NRC during the deferral have been fulfilled.
- d. A list of licensing issues that were outstanding at the time of the deferral and a description of the resolution or proposed resolution of these issues.
- e. A listing of any new regulatory requirements applicable to the plant that have become effective since plant construction was deferred, together with a description of the licensee's proposed plans for compliance with these requirements or a commitment to submit such plans by a specified date.
- f. A description of the management and organization responsible for construction of the plant.
- g. A description of all substantive changes made to the plant design or site since the CP was issued (for those plants for which an OL application has not been submitted).
- h. Identification of any additional required information that is not available at the time of reactivation and a commitment to submit this information at a specific later date.
- i. As necessary, an amendment to the OL application (revised FSAR) and a discussion of the bases for all substantive site and design changes that have been made since the last FSAR revision was submitted (for those plants which were already under OL review at the time of deferral).

7. Staff Actions When Notified of Reactivation

The acceptability of structures, systems, and components important to safety (10 CFR Part 50, Appendix A, General Design Criterion 1) upon reactivation from deferred status will be determined by the NRC on the following basis:

Case 5:18-cv-01983-LCB Document 86-34 Filed 10/14/20 Page 85 of 100
Commission Policy Statement on Deferred Plants, 52 FR 38077-01

- a. Reviews of the approved preservation and maintenance program, as implemented, in order to determine whether or not any structures, systems, or components require special NRC attention during reactivation.
- b. Verification that design changes, modifications, and required corrective actions have been implemented and documented in accordance with established quality control requirements.
- c. The results of any licensee of NRC baseline inspections that indicate quality and performance requirements have not been significantly reduced below those originally specified in the FSAR. Structures, systems, and components that fail to meet the acceptability criteria or will not meet current NRC requirements will be dealt with on a case-by-case basis.

B. Terminated Plant

1. Plant Termination

A licensee should inform the Director of NRR when a plant is placed in a terminated status. In the event that withdrawal of a CP is sought, the permit holder should provide notice to the NRC staff sufficiently far in advance of the expiration of the CP to permit the staff to determine appropriate terms and conditions. If necessary, a brief extension of the CP may be ordered by the staff to accommodate these determinations. Until withdrawal of the CP is authorized, a permit holder must adhere to the Commission's regulations and the terms of the CP and should submit suitable plans for the termination of site activities, including redress, as provided for under 10 CFR 51.41, for staff approval. Moreover, if the plant has been completed to a point that it can function as a utilization facility, the licensee must take all necessary actions to ensure that the facility is no longer a facility for which an NRC license is required.

2. Measures that Should be Considered for Reactivation or Transfer of Ownership of Terminated Plants

The licensee of a terminated nuclear plant, if planning to maintain the option of plant reactivation or transfer of ownership to others—either totally or in part—should consider the following actions:

- a. For the removal and transfer of ownership of plant components and systems important to safety, make necessary provisions to maintain, collect, and transfer to the new owner appropriate performance and material documentation attesting to the quality of the components and systems that will be *38080 required of the new owner if intended for use in NRC-licensed facilities.
- b. Develop and implement a preservation and maintenance program for structures, systems, and components important to safety, as well as documentation substantially in accordance with section III.A.3 of this policy statement. If these provisions are implemented throughout the period of termination, a terminated plant may be reactivated under the same provisions as a deferred plant.

These licensees also must assure that any necessary extensions of the CP are requested in a timely manner.

Dated at Washington, DC this 7th day of October 1987.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

[FR Doc. 87-23740 Filed 10-13-87; 8:45 am]

BILLING CODE 7590-01-M

Footnotes

- 1 These regulatory guides are available for inspection at the Commission's Public Document Room, 1717 H St. NW., Washington DC. Copies of these regulatory guides may be purchased by calling (202) 275-2060 or by writing to the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington DC 20013-7082.

End of Document

© 2019 Thomson Reuters. No claim to original U.S. Government Works.

DEPOSITION EXHIBIT

84



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 5, 2019

Mr. William R. McCollum, Jr.
Chief Executive Officer & Chief Nuclear Officer
Nuclear Development, LLC
3 Bethesda Metro Center
Suite 515
Bethesda, MD 20814

SUBJECT: BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2 – SUPPLEMENTAL
INFORMATION NEEDED FOR ACCEPTANCE OF REQUESTED
APPLICATION FOR ORDER APPROVING CONSTRUCTION PERMIT
TRANSFERS AND CONFORMING ADMINISTRATIVE CONSTRUCTION
PERMIT AMENDMENTS (EPID NO. L-2018-LLM-0004)

Dear Mr. McCollum:

By letter dated November 13, 2018 (Agencywide Documents Access and Management System Accession No. ML18318A428), Nuclear Development, LLC (ND) submitted its application requesting that the U.S. Nuclear Regulatory Commission (NRC) consent to the transfer of Construction Permits (CP) CPPR-122 and CPPR-123 for the Bellefonte Nuclear Plant, Units 1 and 2, currently held by Tennessee Valley Authority (TVA), to ND. In addition, the application requests a conforming amendment that would change the named CP holder and extend the CP expiration dates, a license condition for financial qualifications, as well as an exemption pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.12, from certain requirements related to financial qualifications for construction permits.

The purpose of this letter is to provide the results of the NRC staff's acceptance review of this license transfer application. The acceptance review was performed to determine if there was sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review was also intended to identify whether the application has any information insufficiencies in the characterization of the regulatory requirements or the licensing basis of the plant. The staff followed the requirements of 10 CFR 2.101 and the guidance in the Office of Nuclear Reactor Regulation's Office Instruction LIC-109, Revision 2, "Acceptance Review Procedures," to complete this review.

The regulations in 10 CFR 50.80, 10 CFR 50.33, and 10 CFR 50.34 address the requirements for license transfer applications. Consistent with 10 CFR 50.80, an application for a construction permit transfer must provide as much of the information described in 10 CFR 50.33 and 10 CFR 50.34 with respect to the financial and technical qualifications of the transferee as if it was for an initial license.

The NRC staff has reviewed your application and concluded that the supplemental information delineated in the enclosure to this letter is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed license transfer application in terms of regulatory requirements and the protection of public health and safety and the environment.



W. McCollum

- 2 -

The NRC staff requests that ND supplement the application to address the information requested in the enclosure within 3 months of receipt of this letter. During the response period, the staff will cease its review activities and consider the application to be deferred. If information fully responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review, pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the application.

Please contact me if you have questions regarding the staff positions or information requested herein at (301) 415-5848 or Bill.Gleaves@nrc.gov.

Sincerely,

/RA Anna Bradford for/

William (Billy) Gleaves, Senior Project Manager
Licensing Branch 2
Division of Licensing, Siting, and
Environmental Analysis
Office of New Reactors

Docket Nos.: 50-438
50-439

Enclosure:
Supplemental Information Needed

cc w/enclosure: Distribution via Listserv

W. McCollum

- 3 -

SUBJECT: BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2 – SUPPLEMENTAL
 INFORMATION NEEDED FOR ACCEPTANCE OF REQUESTED
 APPLICATION FOR ORDER APPROVING CONSTRUCTION PERMIT
 TRANSFERS AND CONFORMING ADMINISTRATIVE CONSTRUCTION
 PERMIT AMENDMENTS (EPID NO. L-2018-LLM-0004) DATED APRIL 5, 2019

DISTRIBUTION:

PUBLIC

SBurnell, OPA

DMcIntyre, OPA

RHannah, RGN2

KLois, NRR

NSavoir, NRO

AWilliamson, NRO

RTaylor, NRO

LNist, NRO

NCovert, RGN2

BJones, RGN2

VHall, RGN2

ADAMS Accession No.: ML18348B138 (pkg.) ML18348B139 (letter) *by e-mail NRO-008

OFFICE	NRO/LB2/PM	NRO/LB2/LA	NRO/LB2/BC	DLSE/DD	NRO/DCIP/ QVIB2:BC	NRR/DLP/ PFPB:BC
NAME	WGleaves (C)	RButler	JDixon- Herrity	ABradford	KKavanagh*	ABowers*
DATE	2/19/19	12/17/18	2/12/19	4/5/19	2/12/19	2/13/19
OFFICE	NRR/DIRS/ IRAB	OGC	LB4/PM			
NAME	GBowman*	ANaber* NLO	WGleaves(s)			
DATE	2/12/19	02/11/19	4/5/19			

OFFICIAL RECORD COPY



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SUPPLEMENTAL INFORMATION NEEDED

CONSTRUCTION PERMIT TRANSFER, AMENDMENT REQUEST, AND

EXEMPTION REQUEST

NUCLEAR DEVELOPMENT, LLC

BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-438 AND 50-439

Background

By letter dated November 13, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18318A428), Nuclear Development, LLC (ND) submitted its application requesting that the U.S. Nuclear Regulatory Commission (NRC) consent to the transfer of Construction Permits (CP) CPPR-122 and CPPR-123 for the Bellefonte Nuclear Plant, Units 1 and 2 (BLN), currently held by Tennessee Valley Authority (TVA), to ND. In addition, ND requests a conforming amendment that would change the named CP holder and extend the CP expiration date, a license condition for financial qualifications, as well as an exemption pursuant to Title 10 of the Code of Federal Regulations (10 CFR) 50.12, from certain requirements related to financial qualifications for construction permits.

The NRC staff has reviewed the application and concluded that the following supplemental information is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed CP transfer, conforming amendment, and exemption.

Part 1 - Quality Assurance (QA) Acceptance Review

The staff has reviewed the application against the applicable regulatory requirements in 10 CFR 50.34, 10 CFR 50.55a, and Appendix B to 10 CFR Part 50. ND has contracted SNC-Lavalin Nuclear (SLN) to provide the QA program for BLN. The QA program provided in Enclosure 5 of the application is based on American Society of Mechanical Engineers (ASME) NQA-1-2017, "Quality Assurance Requirements for Nuclear Facility Applications." The NRC staff found Enclosure 5, "SNC-Lavalin Nuclear Quality Assurance Plan (152918-0000-00000-38QP-0001)" not to be in accordance with NRC regulatory requirements of 10 CFR 50.34, 10 CFR 50.55a, and Appendix B to 10 CFR Part 50.

Specifically, the SLN QA plan is not compliant with the above regulations in the following areas:

Enclosure

- 2 -

1. The NRC has not endorsed NQA-1-2017. The NRC has endorsed NQA-1-2015 per Regulatory Guide (RG) 1.28, Revision 5, "Quality Assurance Program Criteria (Design and Construction)," (ADAMS Accession No. ML17207A293) that provides an approved method to meet the regulatory requirements. ND has not reconciled the differences between NQA-1-2017 and NQA-1-2015. This issue could be addressed by providing an analysis of the gaps between NQA-1-2017 and NQA-1-2015.
2. The SLN QA Plan commits to only Part I of NQA-1-2017. RG 1.28, Revision 5 endorses NQA-1-2015, Parts I and II. NQA-1-2015, Part II contains additional quality assurance requirements for the planning and conduct of specific work activities, i.e., for construction, under a QA program developed in accordance with Part I. ND did not describe how the SLN QA plan meets the requirements of NQA-1-2015, Part II.
3. The 2013 Edition of the ASME Boiler and Pressure Vessel Code (BPVC) Section III, subsection NCA, as endorsed by 10 CFR 50.55a, does not incorporate by reference NQA-1-2017. Table NCA-7100-2 incorporates by reference NQA-1-2008/2009 addenda. ND has not reconciled the differences between NQA-1-2017 and NQA-1-2008/2009 addenda. This issue could be addressed by providing a gap analysis between NQA-1-2017 and NQA-1-2008/2009.

Part 2 – Technical Qualification Acceptance Review

In accordance with 10 CFR 50.80(c), a CP may be transferred if the Commission finds that the proposed transferee is qualified to be the holder of the license. 10 CFR 50.80(b)(1) requires an application for a CP transfer to include as much information as required by 10 CFR 50.33 and 10 CFR 50.34 with respect to identity and the financial and technical qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. 10 CFR 50.34(a)(9) requires an applicant for a CP to include, "[t]he technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter," in its preliminary safety analysis report. There is also guidance in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," Section 13.1.1, "Management and Technical Support Organization," Revision 6 (ADAMS Accession No. ML15005A449), related to license transfers and technical qualification.

NRC review guidance document LIC-109, "Acceptance Review Procedures," Revision 2 (ADAMS Accession No. ML16144A521), states, "NRR will consider an RLA [requested licensing action] to be acceptable for review upon the NRC staff's conclusion that the application reasonably appears to contain sufficient technical information, both in scope and depth, for the NRC staff to complete the detailed technical review and render, in an appropriate time frame for the associated action, an independent assessment of the proposed action with regard to applicable regulatory requirements and the protection of public health, safety, and security." Therefore, the focus of the staff's acceptance review for technical qualifications is on whether the application reasonably contains sufficient technical information to complete a detailed review with regard to 10 CFR 50.34(a)(9).

The application includes information about ND's technical qualifications in Attachment 1 and in Enclosure 5 to Attachment 1, which is a QA plan. ND has also provided some information (e.g., resumes for the chief nuclear officer and QA manager), which appear to be of sufficient detail, or depth, about the qualifications of those individuals.

- 3 -

ND stated a limitation on the technical qualifications it currently possesses: "Nuclear Development is technically qualified to carry out its responsibilities as the holder of the Permits in Deferred Plant status." "Deferred plant" is a term defined in the Commission's Policy Statement on Deferred Plants (Volume 52, Number 198, of the *Federal Register*, pages 38077-38080, dated October 14, 1987), and it means, "a nuclear power plant at which the licensee has ceased construction or reduced activity to a maintenance level, maintains the CP in effect, and has not announced termination of the plant." The application explains that ND plans to keep the units in "deferred plant status" for some interim time following transfer of the CPs to it and prior to it commencing construction. The application also states, "Prior to moving beyond Deferred Plant status and beginning licensed construction activities, Nuclear Development plans to enhance its Owner's oversight organization by engaging experienced professionals and/or an experienced nuclear plant operating company with a track record for successfully managing important safety-related projects of comparable scale. Prior to reactivating construction, Nuclear Development will submit the information required by Section III.A.6 of the Deferred Plants Policy, including a "description of the management and organization responsible for construction of the plant" as required by Section III.A.6.e. If necessary and/or desirable, the NRC staff could impose a license condition requiring that resumes for the individuals intended to staff the construction organization be submitted with the notice to NRC contemplated by Section III.A.6."

Based on the review of the application, the staff has concluded that ND has not provided sufficient information addressing its technical qualifications to perform the design and construction activities authorized by the CP. Additionally, it is not clear to the staff how the information provided in the application and a license condition could be used together to allow the staff to make the required findings under 10 CFR 50.80 and 10 CFR 50.34 that ND is technically qualified to perform the activities that the CP authorizes. To address this issue, ND may provide additional information, such as an explanation of how a license condition could be used to allow the staff to make a finding that ND is technically qualified, or ND may provide the information listed in NUREG-0800, Section 13.1.1, related to design and construction responsibilities.

Part 3 – Financial Qualifications and Related Subjects Acceptance Review

In accordance with 10 CFR 50.80(c), a CP can be transferred if the Commission finds that the proposed transferee is qualified to be the holder of the license. The regulations in 10 CFR 50.80(b)(1) requires an application for a CP transfer to include as much information as required by 10 CFR 50.33 and 10 CFR 50.34 with respect to the identity and financial and technical qualifications of the proposed transferee as would be required by those sections if the application were for an initial license.

10 CFR 50.38, "Ineligibility of certain applicants," states that any person who is a citizen, national or agent of a foreign country, or any corporation, or other entity which the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license.

The staff conducted the acceptance review using guidance in LIC-109, LIC-107, "Procedures for Handling License Transfers," Revision 2, (ADAMS Accession No. ML17031A006), Draft Regulatory Guide DG-9004, "Financial Qualifications for Power Reactors and Non-Power Production or Utilization Facilities," (ADAMS Accession No. ML17278A541), and NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Revision 2, (ADAMS Accession No. ML052340514). Specifically, the staff reviewed the subject

- 4 -

of the applicant's financial qualifications necessary for the transfer of a CP, including information required to evaluate an entity's Foreign Ownership.

LIC-109 states, "NRR will consider an RLA [requested licensing action] to be acceptable for review upon the NRC staff's conclusion that the application reasonably appears to contain sufficient technical information, both in scope and depth, for the NRC staff to complete the detailed technical review and render, in an appropriate time frame for the associated action, an independent assessment of the proposed action with regard to applicable regulatory requirements and the protection of public health, safety, and security."

Financial Qualifications

In its review, the staff considered that ND, as a part of the application, indicated that since Bellefonte would be a non-rate-regulated plant (nonutility) it would "not have the benefit of traditional "cost of service" rate regulation." As such, ND has had "difficulty arranging for financing for construction prior to transfer of the construction permits." Therefore, pursuant to 10 CFR 50.12, ND has requested an exemption from the 10 CFR 50.33 financial qualifications requirements and has provided information to demonstrate it meets an alternative lower financial qualification standard of "appears to be financially qualified" as presented in 10 CFR Part 70, SECY-13-0124, "Policy Options for Merchant (Non-Electric Utility) Plant Financial Qualifications," (ADAMS Accession No. ML13057A006), and SECY-15-0123, "The Staff's Statement in Support of the Uncontested Hearing for Issuance of Combined Licenses for the South Texas Project [STP], Units 3 and 4," (ADAMS Accession No. ML15176A532).

Under the "appears to be financially qualified" standard, as presented in 10 CFR Part 70, applicants must submit an Applicant Financial Capacity Plan to demonstrate the applicant's level of understanding of the size and scope of the project, including the level of capital necessary to undertake the project, and the organizational and human resources, experience, skills, and expertise required to ultimately finance the project, when needed. Additionally, applicants must provide a construction cost estimate and propose a license condition(s) to address funding for construction to be satisfied before construction begins should it possess less than 50 percent of funds needed for the licensed activity.

In Attachment 1 to the application, Section 5, "Financial Qualifications," ND provided its Applicant Financial Capacity Plan, a construction cost estimate (Enclosure 4P to the application), and the necessary license condition. ND's Applicant Financial Capacity Plan included a description of the management team for financing and a description of anticipated funding methods and sources of funds. The plan as presented contains an example of the applicant's past experience in negotiating, securing, and managing capital for the large infrastructure Dulles Toll Road project. Based on staff's preliminary review of the application, it appears the applicant made a good faith effort to address the requirements specific to financial qualifications. Upon acceptance of the application, the staff notes that it may request that ND provide additional information regarding the applicant's experience with large infrastructure projects.

As it pertains to this licensing action, decommissioning funding assurance requirements do not apply to ND since this request is for transfer of a CP only.

ND acknowledged the requirements for financial protection in this application. As it pertains to this licensing action, transfer of a CP, insurance and indemnity are not required until such time as the CP holder (licensee) obtains a Part 50 operating license, including a general license

- 5 -

under Part 70 license authorizing ownership, possession and storage of special nuclear material.

Foreign Ownership, Control, or Domination (FOCD)

As required by 10 CFR 50.33(d)(3), if the applicant is a corporation, or an unincorporated association, each application shall state: (1) the state where it is incorporated or organized and the principal location where it does business, (2) the names, addresses and citizenship of its directors and its principal officers, and, (3) whether it is owned, controlled, or dominated by an alien, a foreign corporation, or foreign government, and if so, give details. Under 10 CFR 50.38, if the applicant is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, it shall be ineligible to apply for and obtain a license.

In its application, ND provided information, including the citizenship of its key management personnel and a statement of whether it is owned, controlled, or dominated by a foreign entity.

Based on staff's preliminary review of the application, it appears the applicant made a good faith effort to address the requirements related to foreign ownership, control, or domination.

Upon acceptance of the application, the staff may request additional information about FOCD to complete its review, for example, the staff may request the addresses of directors and principal officers.

Part 4 – Other Regulatory Requirements Acceptance Review

The NRC staff notes that the CP transfer application was submitted solely by ND and not jointly with the current licensee, TVA. License transfer applications are typically submitted under oath and affirmation jointly by the current licensee and the transferee, or alternatively, by the transferee with a statement from the current licensee that it supports the application. The regulation in 10 CFR 50.80(b)(2), states in part, "The Commission may require any person who submits an application for license pursuant to the provisions of this section to file a written consent from the existing licensee or a certified copy of an order or judgment of a court of competent jurisdiction attesting to the person's right (subject to the licensing requirements of the Act and these regulations) to possession of the facility or site involved." Please provide information regarding ND's right to possess the Bellefonte site. This information should include written consent from the existing licensee (TVA) or a certified copy of an order or judgment of a court of competent jurisdiction attesting to ND's right to possession of the Bellefonte site as described in 10 CFR 50.80(b)(2).

DEPOSITION EXHIBIT

85



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 5, 2019

Mr. William R. McCollum, Jr.
Chief Executive Officer
and Chief Nuclear Officer
Nuclear Development, LLC
3 Bethesda Metro Center, Suite 515
Bethesda, MD 20814

SUBJECT: BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2 – ACCEPTANCE OF
APPLICATION FOR ORDER APPROVING CONSTRUCTION PERMIT
TRANSFERS AND CONFORMING ADMINISTRATIVE CONSTRUCTION
PERMIT AMENDMENTS (EPID NO. L-2018-LLM-0004)

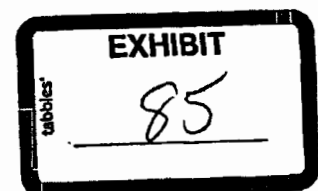
Dear Mr. McCollum:

By letter dated November 13, 2018 (Agencywide Documents Access and Management System Accession No. ML18318A428), Nuclear Development, LLC (ND) submitted its application requesting that the U.S. Nuclear Regulatory Commission (NRC) consent to the transfer of Construction Permits (CP) CPPR-122 and CPPR-123 for the Bellefonte Nuclear Plant, Units 1 and 2, which are currently in deferred status and held by Tennessee Valley Authority (TVA), to ND. The purpose of this letter is to provide the results of the NRC staff's acceptance review of your application. The acceptance review was performed to determine if there is sufficient technical information, in scope and depth, to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

The NRC staff reviewed your application in accordance with the regulatory requirements set forth in Part 50, "Domestic Licensing of Production and Utilization Facilities," of Title 10 of the *Code of Federal Regulations* (10 CFR). Specifically, 10 CFR 50.80(b)(1)(i) states that an application for transfer of a construction permit shall include "as much of the information described in §§ 50.33 and 50.34 of this part with respect to the identity and technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license."

The NRC staff has reviewed your application and concluded that it provides technical information that is sufficient in detail to enable the NRC staff to complete its technical review. The staff will perform an independent assessment of the acceptability of the proposed construction permits transfer in terms of regulatory requirements and the protection of public health and safety and the environment. If the staff needs further information to complete its technical review, you will be advised by separate correspondence.

Based on the information provided in your submittal and discussions during the pre-licensing meetings, the NRC staff has estimated that this licensing request will take approximately 700 hours to complete. The NRC staff expects to complete this review by September 2020.



W. McCollum

2

These estimates are based on the NRC staff's initial review of the application and they could change, due to several factors including requests for additional information, unanticipated addition of scope to the review, and review by NRC advisory committees or hearing-related activities. If there are emergent complexities or challenges in our review that would cause changes to the initial forecasted completion date or significant changes in the forecasted hours, the reasons for the changes, along with the new estimates, will be communicated by the assigned project manager during routine interactions.

Please contact me if you have questions regarding this acceptance letter at (301) 415-6616 or Omid.Tabatabai@nrc.gov.

Sincerely,

/RA/

Omid Tabatabai, Senior Project Manager
New Reactor Licensing Branch
Division of New and Renewed Licenses
Office of Nuclear Reactor Regulation

Docket Nos. 50-438 and 50-439

cc: Distribution via Listserv

DEPOSITION EXHIBIT

122

REDACTED

Highlighted Portions Confidential

EXPERT REPORT

Re: Bellefonte Nuclear Power Plant – NRC Requirements for Transfer of Site

Prepared By: David A. Repka

Consulting Attorney – Nuclear Regulation*

9003 Hempstead Avenue

Bethesda, MD 20817

david.repka3@gmail.com

****Admitted in Washington, D.C.***

Date: February 11, 2020

INTRODUCTION

1. I am an attorney and have practiced for over 38 years in the field of nuclear regulation, licensing, and compliance. This report documents my expert opinion on an issue of nuclear regulation raised in connection with the Purchase and Sale Agreement between Nuclear Development, LLC of Bethesda, Maryland ("Nuclear Development") and the Tennessee Valley Authority ("TVA") for the Bellefonte Nuclear Plant site. The report addresses issues under the Atomic Energy Act of 1954, as amended, 42 U.S.C. § 2011, *et seq.* ("AEA"), and the regulations of the U.S. Nuclear Regulatory Commission ("NRC" or, with its predecessor agency, the "Commission").

QUALIFICATIONS

2. I am a retired partner with the law firm of Winston & Strawn LLP. I served with the firm (including its predecessor firm) in the Washington, DC office for almost 33 years – from June 1984 through April 2017. I focused my practice on the health and safety regulations of the NRC and in related environmental and administrative laws. I have represented and advised many domestic and international clients on nuclear regulatory compliance issues, licensing of nuclear projects, internal and federal investigations, civil and criminal enforcement matters, as well as nuclear employment and safety culture matters.
3. My experience has included many matters involving licensing of nuclear power plants, including construction permits, operating licenses, early site permits, combined licenses, and renewed licenses. I have also advised clients on many issues related to transfers and potential transfers of NRC licenses – including license transfer issues raised in connection with purchases and sales of nuclear power assets, purchases and sales of nuclear licensees or shareholders, and corporate reorganizations affecting NRC-licensed entities and nuclear assets.

